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The Arris and Gale Lectures

ON

SOME EMBRYOLOGICAL PROBLEMS IN RELATION TO MEDICINE.

Delivered before the Royal College of Surgeons of England on Feb. 28th and March 2nd, 1910,

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LECTURE I.

Delivered on Feb. 28th.

MR. PRESIDENT AND GENTLEMEN,—I should like to preface my lecture this afternoon by offering my thanks to the Council for the honour they have conferred upon me in appointing me to deliver two Arris and Gale lectures for the current year. I should also like to express my gratification on a point of more than passing interest to teachers of anatomy—namely, that the Council should have appointed two of those teachers to give the Arris and Gale lectures in successive years, those appointments coming after a period of over 30 years, during which, as Professor Elliot Smith noted in his first lecture in December last, no professed anatomist had held this lectureship.

RECONSTRUCTION METHOD.

In choosing a subject I came to the conclusion that as the advance in embryology in the last few years has been as great as that in many other scientific departments, and as this advance has been to a large extent the result of improved methods of research, you might be interested in hearing something of the mode of procedure by which embryologists are to-day endeavouring to unravel the earliest stages of development and particularly in seeing some of the results. By means of the reconstruction method in wax suggested by Professor Born it is now possible to visualise the various organs of the embryo, even when those organs are just laid down. Born's method, now well known and extensively utilised in this country, may be briefly described as follows.

The sections of the embryo are drawn on a thin sheet of paper either by the aid of a camera lucida or a projection apparatus and special drawing board, at a magnification of 25, 50, or 100 times the size of the section, as desired. Each sheet of paper is then placed on a stone, such as is used in lithographic work, and melted wax is poured over it. When partly solidified it is well rolled, the thickness of the wax being determined by two brass strips, one on either side of the sheet and either one-half millimetre or one millimetre in thickness, according to a calculation based on the thickness of the section and the magnification of the drawing. In this way wax plates are obtained from which the shape of each drawing can be readily cut by a sharp knife. These are all piled one on the other and when completed give a reproduction in wax of the form of the embryo magnified in accordance with the number arranged at the time of drawing. Many of the drawings on the screen have been made from models reconstructed in this way.

Everyone who works with serial sections knows how difficult it is to keep in mind the structures seen in each section so as to picture to himself the form of any part when entire, and still more difficult is it to convey to others the information which one has gained from working through such a series. By means of this kind of model, however, one is able to demonstrate the developmental condition of the various organs with the greatest ease, and consequently for teaching purposes they are invaluable. But in addition to this they enable us to be much more exact in our deductions, and they bring out, often with startling clearness, facts which would almost certainly be overlooked if the sections were simply observed by the worker and then a mental picture conceived of the condition of the parts.

In the two lectures at my disposal I decided to take up the early stages of development of certain structures which must always have an added interest on account of their relation to medicine. A study of the early stages of the developing heart, the thyroid, and to a less extent the liver and lungs, brings out many points which have a practical significance and provides the key for certain problems which would otherwise remain unanswered. Most of these early stages are, of course, well known through the researches of a host of workers in this country and on the continent, foremost amongst which must be placed the immortal name of His. But having been fortunate enough to obtain three embryos, each in age under one month, and to reconstruct wholly two of these, and having access to other specimens which in age are intermediate, I am able to give a picture of the chief stages of the developmental history of the organs mentioned above up to the end of the first month, and to bring out, I hope, some points which will serve to make yet clearer our conception of what is going on in this eventful time.

I. THYROID BODY.

In order to understand the significance of the thyroid body in the adult, it will be advantageous if we first of all study the arrangement of the corresponding structure lower down in the vertebrate series. Let me say first of all that it will be necessary for us to deal separately with the median and the so-called lateral lobes, since in lower vertebrates these structures are independent throughout life. In nearly all fishes, and in amphibians, reptiles, and birds there is a median thyroid which develops from the floor of the mouth, and, in addition, a pair of outgrowths formed behind the last gill pouches, named the *supra-pericardial bodies* or *post branchial bodies*. In elasmobranch fishes, since they extend dorsally above the pericardium, the term supra-pericardial body is applicable, whilst in other forms they lie at the root of the trachea, and therefore some other designation is desirable. More recently the names "ultimo-branchial" and "telo-branchial" have been applied to these bodies.

Median thyroid.—In amphioxus the median thyroid retains its connexion with the foregut throughout life, and may be regarded as a gland accessory to the buccal cavity. According to Wiedersheim it discharges a sticky secretion which serves to unite the smaller food particles into larger masses, which are thereby prevented from being carried out with the stream of water through the gill slits. This function, as an important accessory in the taking in of food, becomes of less importance in the altered conditions of life in higher vertebrates. In the latter the connexion with the mouth cavity is lost at a very early stage of development and the gland embarks on a new career. It now consists of a mass of closed follicles which contain colloid.

The post-branchial bodies, as previously noted, are very widely distributed throughout the vertebrate series. They are not always bilateral, but in lower forms may be unilateral—a fact which has given rise to an interesting theory with regard to their morphology, to which I will refer shortly. Their function is practically unknown. To summarise the main points about them, it might be said that they are epithelial bodies, that in most vertebrates below mammals they never contain colloid, and that they never join with the median thyroid. In one of the lowliest of mammals, echidna, the post-branchial bodies contain colloid, but remain separate from the median thyroid. In other mammals, including man, the association between these bodies and the median thyroid is of a more intimate character. In the early stages of development, however, they are quite separate. (Fig. 1.)

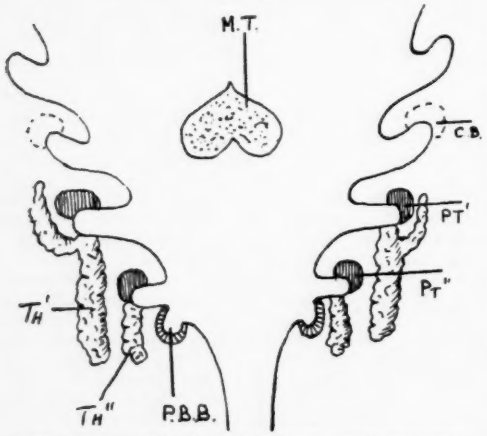
Adverting to the absence of any knowledge of the function of the post-branchial bodies, the two following points seem worthy of notice. They are very close to the anterior end of the cœlom and the pro-nephros, and in this region in many lower vertebrates there is considerable accumulation of lymphoid tissue.

There are, at least, two views regarding the morphology of these interesting structures. In the one they are looked upon as derivations from a rudimentary gill-pouch placed behind the ordinary gill-pouches at the back of the pharynx, where it narrows to form the œsophagus; in the other, Maurer has suggested, particularly when unilateral, that such a body may be homologous with the œsophago-cutaneous passage which exists in certain fishes and in the myxinæ, for example, is only present on one side, the left.

In the light of the knowledge gained from a study of the comparative anatomy of the thyroid and post-branchial bodies we may turn to an examination of the development of the thyroid gland in man. Taking first the

median rudiment it is interesting to find that it is present as early as the third week of intra-uterine life (Fig. 2) and that at this stage it is in open communication with the anterior end of the fore-gut. It is placed dorsal to the aortic stem and only later when the head has grown more forwards is it placed ventral to that structure. In Ingall's embryo the second stage is seen; it is directed at first ventralwards towards the point of division of the aorta and then bends at

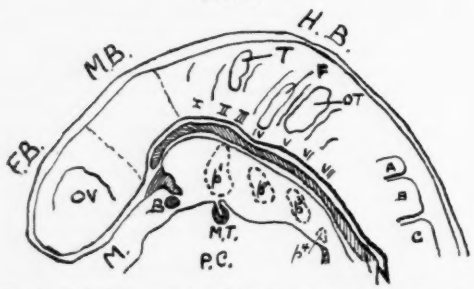
FIG. 1.



Outline diagram of the developing pharynx and its derivatives in the cat (after Verdun). M.T., Median thyroid. TH' and TH'', Thymus rudiments from the third and fourth pouches. PT' and PT'', Parathyroids from the third and fourth pouches. C.B., Carotid body. P.B.B., Post-branchial body (lateral thyroid).

a right angle. The duct is still open and the lower end is bilobed, a condition resulting from a well-marked groove which appears on its deeper surface. In the third stage taken from an embryo of 28 days the condition of affairs is most suggestive. The duct has disappeared except for a short piece near the lower bifid end. This part of the duct and the gland attached to the end of it are still at right angles to each other. The thyroid itself is two-lobed, but the lobes are asymmetrical. The left is larger than the right, which is in a very rudimentary condition. From a reconstruction which

FIG. 2.



Head end of a human embryo 2·5 millimetres in length (third week). F.B., M.B., H.B, Fore, mid, and hind brain. OV, Optic vesicle. I to VII, Seven neuromeres of the hind brain. T, Trigeminal ganglion. F, Ganglion acoustico-facialis. OT, Otocyst. A, B, C, Occipital somites. p^1 to p^4, Pharyngeal pouches. M., Mouth. B., Bucco-pharyngeal membrane, twice perforated. P.C., Pericardial cavity. M.T., Median thyroid. × 50.

I made I came to the conclusion that the median thyroid in this case was formed largely from the left lobe. (Fig. 3.) The latter not only formed the left portion of the mass, but, extending across the middle line to the right, contributed largely to the right portion. The asymmetry of the two primary lobes and the subsequent formation of the bulk of the median thyroid out of the left lobe explains why the pyramid, when present, should be to the left of the middle line instead of median. Conversely, in those cases in which the right lobe is predominant one would expect to find any persistent pyramidal lobe to the right of the middle line.

The post-branchial bodies (lateral lobes of thyroid).—In Ingall's embryo of 4·9 mm. (i.e., end of third week) these bodies cannot with certainty be identified. A week later (i.e., in embryos of about 28 days and a length of about 7 mm.) the condition of parts is very satisfactory for studying a problem of great interest—namely, their relationship

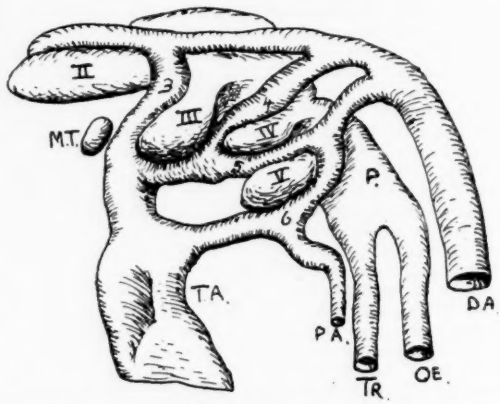
FIG. 3.

Drawings of a wax model reconstruction of the median thyroid of a human embryo 7 millimetres in length (about 28 days). A, Seen from the front. B, From the left side. T.D., Distal end of ductus thyroglossus. L.L., Left lobe. R.L., Right lobe. LL', Extremity of left lobe which has passed across to the right side in front of the small right lobe. × 110.

to the pharynx. The fourth pouch is well developed, it is in contact over a considerable area with the bottom of the external gill-slit, and exhibits two divisions; of these, one is cephalad, the other caudad, whilst between the two runs the rudimentary fifth aortic arch. (Fig. 4.)

What is the significance of these two divisions? The cephalic division is well marked as a hollow diverticulum placed between the fourth and fifth aortic arches, and the question arises whether this may not give rise to a thymus metamere. I cannot from my own specimens supply the answer, but Groschuff has laid particular emphasis on the point that it may; and in drawing up my scheme of derivatives from the pharynx this occasional if not constant origin of a thymus must be considered. According to Groschuff

FIG. 4.



Drawing of a wax model reconstruction of the pharynx and its derivatives of a human embryo of four weeks. Left side: The anterior end of the pharynx is not shown. II to V, Second to fifth pharyngeal pouches. 3 to 6, Third to sixth aortic arches. T.A., Truncus arteriosus. M.T., Median thyroid. P., Pharynx. P.A., Pulmonary artery. TR., Trachea. OE., Œsophagus. D.A., Dorsal aorta. × 100.

the outgrowth may persist in the adult as a parathymus, which either retains its independency (accessory thymus) or fuses with the parathyroid derived from the fourth pouch.

But it is with the caudal outgrowth that we are most concerned, since there seems little doubt that it is the representative in man of the post-branchial body of other vertebrates. It forms a wide diverticulum which extends caudalwards and opposite which is a shallow external depression of the ectoderm. Leaving out of consideration for the moment the debated question of lung origin, these bodies are truly post-branchial or ultimobranchial, connected on the one hand with the gut, and on the other hand directed outwards towards the ectoderm. But Elze has recently brought forward evidence regarding the morphological significance of these post-branchial bodies in the human embryo, and this evidence I am able to confirm

in almost every particular. According to Elze, what we are dealing with here is in reality a fifth branchial pouch, not necessarily the whole of the pouch, but a representative or derivative of a fifth pouch which has become rudimentary.

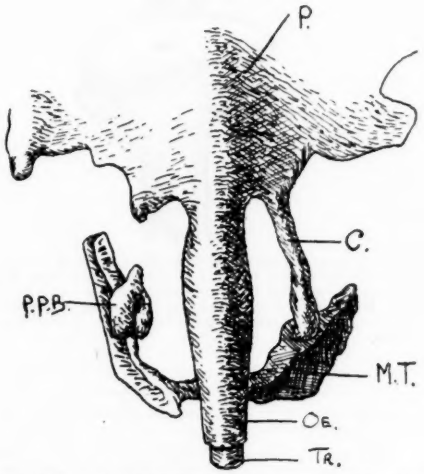
On what evidence is this conclusion based? It is this. That in the position of a fifth gill arch—i.e., immediately in front of and external to the post-branchial body—certain typical features are recognisable—namely, a rudimentary fifth aortic arch, a trematic branch of the vagus, and an external gill depression.

The view has also received striking confirmation by a research of Hammar, which Elze remarks seem decisively to settle the point. Hammar has described a human embryo of 5 mm. which possessed five developed pouches, all of which reached the ectoderm. The post-branchial body is represented as a bulging out from the fifth pouch.

Before leaving this question of the morphology of the post-branchial body a brief reference may be made to Greil's work on acanthias and anuren amphibia. He has conclusively proved that in these lower vertebrates the post-branchial body belongs to a rudimentary gill pouch, which no longer attains full development. The further history of the post-branchial body in the human embryo has been investigated, amongst others, by Verdun and Sudler, but before referring to their work I wish to call attention to the condition of the post-branchial body in monotremes.

In echidna, thanks to the work of Maurer, its history is well known; it contains colloid substance; it remains separate from the median thyroid. It is found at the side of the trachea, near the point at which it was originally laid down, whilst the median thyroid, accompanying the heart and great vessels, has shifted relatively backwards towards the thorax. In other mammals, also, the post-branchial body contains colloid, but, losing its independence, it becomes associated with the median thyroid to form a single structure. (Fig. 5.) How much it contributes to that body

FIG. 5.



Dorsal view of the pharyngeal region of a human embryo about 5½ weeks (Sudler). P., Pharynx. M.T., U-shaped median thyroid composed of isthmus and two lateral lobes. P.P.B., Post-branchial body (the so-called lateral thyroid) joining with the median thyroid; on the right side the connexion (C.) between the post-branchial body and the pharynx is still retained.

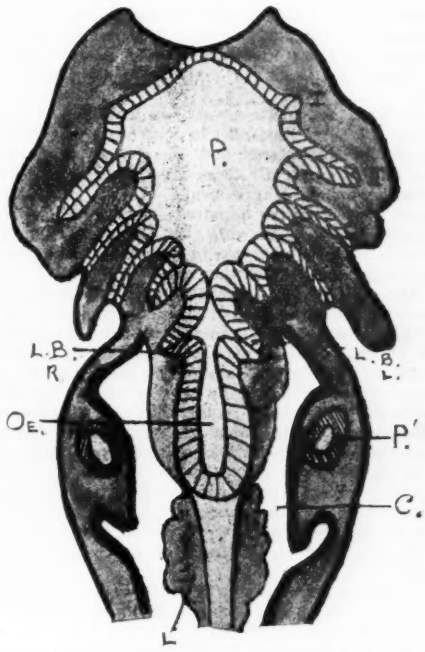
is a question which must for the present remain unsettled, but both Verdun and Sudler find that the lateral thyroid takes very little share in the formation of the adult organ. Indeed, according to Verdun, who bases his conclusions on an examination of the ox, cat, sheep, rabbit, antelope, and man, the thyroid in mammals is formed practically entirely from the median anlage, whilst the post-branchial body degenerates. This statement is in striking contrast with what Maurer has found in echidna, and it is, therefore, important that additional reconstructions of the thyroid in human embryos, at the early part of the second month, should be undertaken.

Accessory thyroid bodies.—The occasional existence of these bodies is well known, and the occurrence of enlargements of isolated masses of thyroid tissue has been frequently described by surgeons. Perhaps those best known occur somewhere in the track along which the median anlage has descended during its ontogeny. But a second group may arise in a somewhat different way. The median thyroid enlarges by lateral sprouts, and apparently one or more of these may become detached from the rest of the gland. The shifting backwards, in a relative sense, which subsequently occurs in connexion with the main mass, may leave these detached bodies behind, and as the third pair of aortic arches straighten out to form the internal carotids they may become closely associated with them. In this way one may explain the occurrence of isolated masses of thyroid tissue in the region of the upper part of the neck, and in the neighbourhood of the angle of the jaw, which have become enlarged and subsequently removed.

II. LUNG BUDS.

I come now to consider the question of the mode of origin of the lung buds. To von Baer, who in 1828 published the first volume of his great work entitled, "Observations and Reflections on the Development of Animals," we owe the first description of the development of the pulmonary apparatus. In that volume von Baer describes in the chick two small hollow

FIG. 6.



The development of the lungs in the frog (Goette). P., Pharynx. I to V, One to five pharyngeal pouches. L.B.R. and L.B.L., right and left lung buds. OE., Œsophagus. P., Pronephros. C., Cœlom. L., Liver.

swellings about the middle of the fore-gut, which appear on the third day. A day or two later the trachea is distinguishable as a short canal, which soon separates off from the dorsally placed œsophagus, except in front, where the two tubes remain in communication one with the other. From that time down to the present those who have worked in this field fall mainly into two groups. In the one the view that the lungs are primitively paired structures and appear before the demarcation of the trachea, as von Baer found, receives fairly wide, but by no means convincing, support. In the other the observers are for the most part agreed that the respiratory apparatus is derived from a median unpaired structure, which at the caudal end subsequently divides into two buds the rudiments of the lungs. Corresponding with these two views of mode of development are two conceptions of the morphology of the lungs. On the one hand, we have the idea that the primitively paired structures are in

serial homology with the gill pouches; and on the other, that the median unpaired structure, which represents the trachea and the caudal end of which soon becomes bi-lobed to form the lungs, is the homologue of the swim bladder in fishes.

I have not the time in this lecture to go farther into the history of the subject, nor, indeed, is there any need. Those of you who wish for further details will find a most comprehensive paper by Dr. Marshall Flint of the University of California dealing with the whole question of lung development in the *American Journal of Anatomy* for 1906–07. The attempt to bring lungs and swim bladder into phylogenetic relationship has not up to the present time been very satisfactory. The difficulties are many. It is well known, for example, that the swim bladder may be either single or paired—rarely the latter; that it is a hydrostatic organ to enable the fish to rise and sink in the water; that in ganoids and especially in dipnoan fish it can take on the functions of respiration, and that it may arise either from the dorsal or the ventral wall of the fore-gut, but most frequently from the dorsal. It is not surprising, therefore, that evidence in favour of associating the lung buds with other outgrowths from the pharynx has been steadily accumulating, and quite a number of observers incline to the view that they are in serial homology with the gill pouches. May I direct your attention to this diagram of Goette (Fig. 6) which shows the origin of the lungs in an amphibian. The resemblance to the gill pouches is very striking and the inference is irresistible. Goette sums up the matter thus: "In their origin the lung buds in anura completely resemble the anlagen of the pharyngeal pouches, and therefore are to be regarded as transformations of such pouches which have been drawn in from the body wall and surrounded by cœlom."

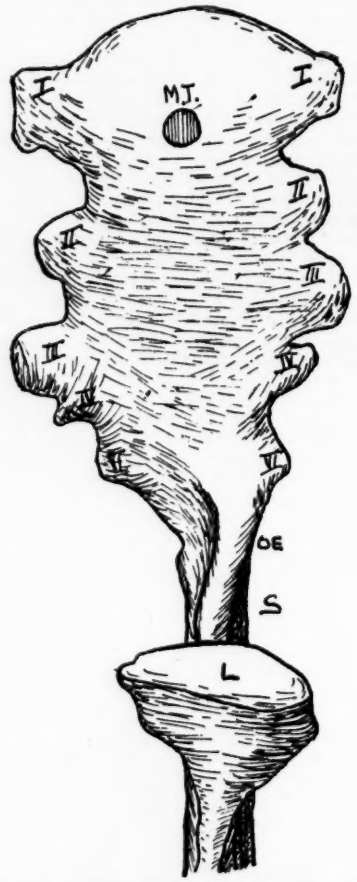
In addition to Goette's work on amphibia, I must also mention that of Kastschenko on birds, of Weber and Buvignier on minopterus and other forms, and of Fol on human embryos. In all these investigations there are two outstanding points of agreement—viz., the abandonment of the idea of a primitive unpaired origin for the lung buds, and the adoption of the view that they represent a pair of diverticula from the pharynx, in series with the gill pouches, immediately behind which they arise.

On the other hand, amongst those whose work has contributed to our knowledge of the development of the lungs, and whose views are not in accord with the conclusions stated above, are His, Kölliker, and Greil in Germany, Robinson in this country, and Minot and Flint in America. The conclusions arrived at by these observers are (with the exception of Greil, who in anura finds the lung buds paired but disagrees with the idea of homologising them with gill pouches), on the whole, entirely favourable to the view of an unpaired origin for the pulmonary apparatus, and Flint, whose investigations were made on the pig, concludes "that if the pulmonary apparatus in mammals should finally be shown to have a serial relationship with the gill pouches, all trace of the process is lost in the pig."

Now I cannot help thinking that the main reason for this sharp line of difference of opinion regarding the origin of the lungs depends to a large extent upon the fact that the two processes—(1) evagination of buds and (2) division of tube—tend from the very beginning to proceed simultaneously, and that sometimes the one and sometimes the other is in advance. Undoubtedly the lung buds may be post-tracheal or the trachea may be post-pulmonary in time of origin, or the two processes may synchronise at the start. But the observation repeatedly made that the buds can and do appear first is important evidence, and whilst not proving their homology with the gill pouches, goes far in support of that contention.

Let me turn now to describe two models which I have here on the table, and which illustrate two stages in the development of the lungs. In the one the lungs are seen in the third week, and in the other at the end of the fourth week. In the former (Fig. 7) it will be noticed that the pharynx is wide from side to side, flattened dorso-ventrally, and has a series of four pouches on each side. The pharynx is succeeded by a very short piece which joins it to the stomach. This represents the œsophagus, and the arrangement of this part of the tube is worth special attention. Although it is so extraordinarily short it manages to change the direction of its long axis, so that whilst at its commencement this is transverse, at its termination it is antero-posterior. The lung buds are just visible as two small outgrowths behind the last pair of pouches, and on account of the rapid change in the direction of the long axis the two buds are in different planes, one being behind and to the right and the other in front and to the left.

FIG. 7.



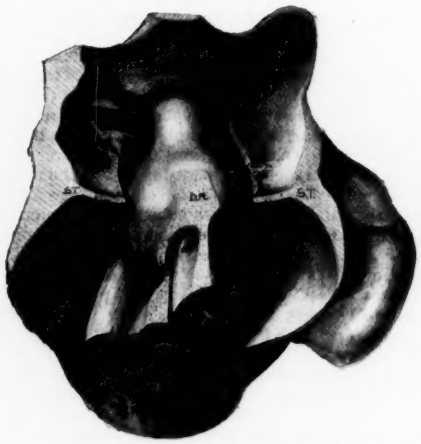
View of a model of the developing pharynx in a human embryo 2·5 millimetres long. The model is seen from the front and is drawn as if it were straightened out. M.T., Median thyroid. I. to VI., One to six pharyngeal pouches (fifth pouch not yet formed). OE, Œsophagus. S, Stomach. L, Liver.

This disposition of the buds at the end of the fourth week is seen in the model and in the diagram (Fig. 8). The septum transversum runs transversely across them, so that they are in part abdominal organs; they are asymmetrical, already foreshadowing the asymmetry of the two lungs in the adult, and they have an interesting relationship to mesenteries.

The dorsal mesocardium originally connected with the under aspect of the pharynx is, with the formation of the respiratory system, fixed to the latter at the point which corresponds to the bifurcation of the trachea, and it is between the two layers of this fold that the pulmonary veins grow from the lung buds to the heart. Subsequently the dorsal mesocardium disappears. But in the drawing of the 7 mm. embryo you will notice that it is continuous at this stage, as in the 2·5 mm. embryo, with the septum transversum, the structure which will form a part—the central tendon—of the diaphragm. Below the septum transversum the right lung bud also has a mesenteric fold attached to it. It is known as the "caval mesentery," or better, the "plica venæ cavæ," for the reason that when it is traced caudalwards it is continuous with a fold in which the earliest sign of the inferior vena cava is found.

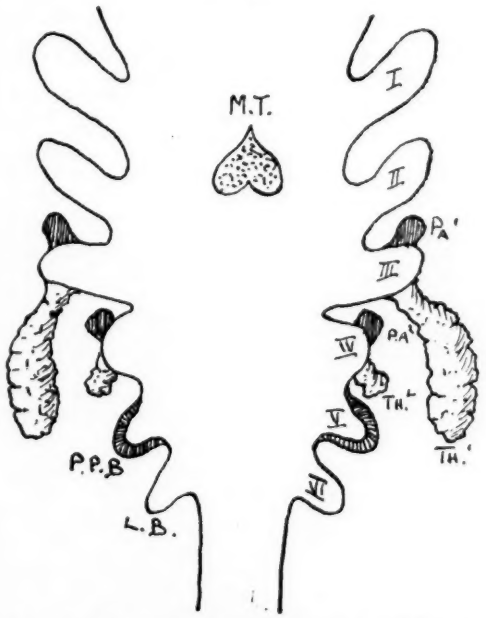
The caval mesentery is really a special development of the dorsal mesogastrium, at first bilateral but which with the displacement of the stomach to the left disappears on that side and becomes prominent on the right. The caval mesentery unites right lung bud to liver and posterior body wall to liver and its hepatic attachments are clearly seen by a reference to one of the diagrams of the liver (Lecture II.). It occupies the ground which will subsequently be taken by the inferior vena cava, and probably the main reason for its existence is to provide the track along which the inferior vena cava may extend across the back of the liver. In rabbit embryos, according to F. T. Lewis, the fate of the caval mesentery is briefly this. It forms more than a nidus for the laying down of the inferior vena cava, since the part most cephalad is invaded by the right lung, of which it forms the lobus inferior medialis of Krause. Lower down it meets and unites with the liver, hepatic tubules grow into it, and it becomes a part of the liver.

FIG. 8.



The posterior body wall of a human embryo about 28 days. The position of the diaphragm is shown by the line (interrupted in the middle) running transversely from S.T. to S.T. The lung buds, right and left (R.L. and L.L.) are seen to be partly thoracic and partly abdominal in position. D.M., Dorsal mesocardium. The arrow points upwards to the peri-œsophageal cœlom. × 25.

FIG. 9.



Schema of the pharyngeal pouches and their derivatives in the human embryo. M.T., Median thyroid. I to VI, One to six pharyngeal pouches. TH¹ and TH², Thymus rudiments. PA¹ and PA², Parathyroids. P.P.B., Post-branchial body (rudimentary fifth pouch). L.B., Lung bud, representing a sixth pouch.

SCHEMA OF PHARYNGEAL POUCHES.

If we regard the post-branchial bodies (lateral thyroids) as representing rudimentary fifth pharyngeal pouches (Fig. 9), and the lung buds as representing pharyngeal pouches also, arising behind them, then we can construct a schema of such pouches in the human embryo, which shows six pairs in all. But it should be clearly understood that there is normally no period in the human embryo in which there are at one and the same time six clearly recognisable pouches in connexion with the gut on each side. In the diagram shown of the 2·5 mm. embryo (Fig. 7), there are clearly five pouches present, the rudimentary fifth having not yet formed. At the end of a month—i.e., in the 7 mm. embryo—all the pouches are recognisable, but the sixth or pulmonary now appears at the end of the trachea.

It is interesting and significant that six pairs of aortic arches are developed in the human embryo as in some other mammals, and that the fifth should be so transitory and leave no vessel, as far as is known at present, derived from it. This is in conformity with the rudimentary nature of the fifth pouch, whilst in connexion with the sixth pair of arches the pulmonary arteries are developed and are distributed to the lungs, organs phylogenetically related either to the gill-pouches or to the swim-bladder.[1]

A Clinical Lecture

ON

ITCHING DISEASES OF THE SKIN AND THEIR TREATMENT.

Delivered at the Medical Graduates' College and Polyclinic on March 17th, 1910,

BY J. L. BUNCH, D.SC., M.D. LOND., M.R.C.P. LOND.,

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GENTLEMEN,—To the practitioner there are no more unsatisfactory cases, to the patient there are few diseases which cause greater discomfort, than itching eruptions of the skin. Whether the case be one of pruritus, eczema, urticaria, lichen planus, scabies, or other affection of the skin, the constant irritation, restlessness, discomfort, and want of sleep are a source of worry and anxiety which soon tell upon the patient's temper and general health, and in many cases drive him almost to despair, and occasionally, in neurotic individuals, even to self-destruction.

CLASSIFICATION.

To the student unnecessary difficulties are presented by the inability of different dermatological schools to agree upon a simple nomenclature or classification of the itching diseases of the skin, and it is not only the student who is sometimes in doubt whether pruritus is a symptom or a disease, and how it is related to, or differs from, prurigo. To speak of an itching skin lesion as "pruriginous" is only to complicate matters still further; indeed, in my opinion, the use of the adjective in this sense is entirely unjustifiable.

The view which I personally hold, and which is held by the chief French dermatologists (especially Brocq and Darier), is that pruritus and prurigo are diseases in which itching is the primary factor, and which differ from one

[1] In a paper "On Certain Features in the Development of the Alimentary Canal in Lepidosiren and Protopterus," published in the *Quarterly Journal of Microscopical Science*, February, 1910, Professor Graham Kerr says "that he feels compelled to accept the general homology of the organs known in various subdivisions of the vertebrata under the name of lung and swim-bladder or air-bladder." In this paper Professor Kerr brings forward evidence to show that migration of the air duct from a ventral to a dorsal position may take place.

another only in the fact that in prurigo the scratching gives rise to certain cutaneous reactions in the form of papules or lichenification. I repeat that in prurigo, as in pruritus, itching is the primary phenomenon, and that prurigo is pruritus accompanied by certain definite lesions of the skin which are brought about by scratching. This definition makes the differential diagnosis between the two affections quite easy, it clears the ground of all misapprehensions, and makes it clear that the itching is the primary affection and the skin lesions entirely secondary.

In pruritus, as distinguished from prurigo, some traumatic lesions may be brought about by scratching, such as pus infection, impetigo contagiosa, and secondary eczema, but there are no prurigo papules and no lichenification. Inasmuch as in prurigo the itching is primary, this forms a distinction from those cases of eczema which become lichenified and therefore come to resemble an eczematised prurigo. A secondary prurigo may of course arise, just as a secondary pruritus may and does exist.

ETIOLOGY.

It has been argued that itching is not necessarily pathological, that the brushing of a hairy portion of skin lightly with a feather gives rise to intense itching which persists for some time when the stimulus is removed, and that there are special nerve endings and end organs for this sensation, as there are for the sensations of pressure, touch, heat, and cold. But that these end organs can be centrally stimulated and itching arise from a disturbance of the central nervous system alone has never been demonstrated, and we are fully justified in maintaining that a peripheral stimulus is necessary. The commonest peripheral stimuli causing pruritus are the bites of insects, such as fleas, and many vegetable and chemical substances. Want of cleanliness is of itself a sufficient stimulus to many skins, and when combined, as it so often is, with other sources of irritation, acts as a powerful factor to intensify their action.

Secondary pruritus is, of course, common in many dermatoses, such as eczema, lichen planus, scabies, urticaria, mycosis fungoides, and the dermatitis of Duhring. In such cases it follows or accompanies the outbreak of the skin lesion, and there can be no question of the sequence. Some diseases are, of course, never itchy, such as lupus, syphilis, and psoriasis.

Primary pruritus is a functional affection of the skin, the sole symptom of which is the subjective sensation of itching. The skin appears healthy and shows no pathological changes to which we can point as a cause for the irritation. Such pruritus occurs in neurasthenia, chorea, and excessive emotion, and may perhaps be ascribed to an over excitability of the special end organs in the skin, if not to an ill-defined auto-intoxication. Such an auto-intoxication does undoubtedly cause pruritus in diabetes, uræmia, gout, and jaundice. The same effect is produced by subcutaneous injections of morphia when these are repeated too frequently or in too large doses; excessive doses of belladonna also have much the same action. It is well known that certain kinds of food and articles of diet greatly aggravate any pruritus or may even give rise to an attack, especially sugars, malt liquors, coffee, and some kinds of tinned fish. In all these cases the poison is circulating in the blood stream, and diffuses thence into the lymph which is in contact with the nerve endings in the skin, so that these are directly attacked by the toxic substance.

Other etiological factors are excess of any kind, whether mental or physical; depression, whether preceded or not by over-excitement; and a neurotic taint. Rapid changes of temperature or pressure often bring on an attack in predisposed individuals. Thus, there is a well-known form of summer pruritus, and some individuals who work exposed to high temperature are especially liable to pruritus; in others a draught or stream of cold air has the same effect. Many women experience itching when at night they remove articles of clothing which have caused pressure, such as corsets, garters, or tight shoes, and this is almost certainly due to dilatation of the capillaries of the skin following the prolonged constriction to which they have been subjected during the day. The vaso-motor disturbance is only a temporary one and soon passes off, but the pruritus may persist for an hour or more.

CLINICAL VARIETIES.

The clinical varieties met with may be divided into (1) generalised and (2) local. Of the two, generalised pruritus is far the more troublesome and may make life absolutely unbearable to the sufferer. The itching is not continuous but comes on in spasms, during which the patient cannot possibly refrain from scratching and may tear his skin almost to pieces, using not only his nails but any instrument he can find which seems to promise relief. These attacks are brought on especially by the warmth of bed, so that many patients absolutely dread going to bed, knowing that they will be unable to sleep until their continued and forcible scratching has so benumbed the cutaneous nerves that they fail to respond any longer to the sensation of pruritus, or the smarting produced by their scratches has so overpowered the feeling of itching that the latter is no longer perceived. Of course, no skin, however thick or resistant, can stand such treatment for long without resenting it, and it soon begins to show the effect of the mechanical irritation to which it has been subjected. Bacterial infection is added before long and impetigo, ecthyma, furunculosis, and other staphylococcal diseases are superadded to the abrasions of the skin wrought by the patient's nails. The most severe cases are those in old persons in whom degenerative changes have taken place. In them the skin becomes dry, excretion is deficient both by the kidneys and the skin, and toxic substances, whether of a gouty, alcoholic, or other nature, act readily upon a dry and susceptible skin.

Local pruritus may involve the most distant portions of the skin. The palms of the hands and soles of the feet, especially in hyperidrotic persons, are often affected, and pruritus of the nose is not uncommon. But pruritus of the genitals is much more troublesome—in men, of the scrotum and anus, and in women, of the vulva.

The itching is usually intense, especially at night, and leads to agonised scratching and its usual consequences—thickening of the skin and mucous membrane. Kraurosis vulvæ comes to be simulated in women, especially in diabetic patients, where the sugar-containing urine acts as a continual source of irritation. In such cases the mucous membrane of the vulval orifice is dry and irritable, the epithelium having a glazed, whitish appearance accompanied by atrophic changes, and no treatment short of excision of the affected strip of mucous membrane can relieve the itching. Uterine discharges, diseases of the rectum, such as hæmorrhoids, fissure, or carcinoma, are similarly potent factors, and bring about a condition which cannot easily be distinguished from a primary chronic eczema.

Prurigo is an itching eruption, not contagious and not hereditary, starting in most cases in early infancy. It may be defined as pruritus *plus* papular or lichenified lesions of the skin. The itching is the primary factor, but is soon accompanied by an eruption which presents all the picture of an urticaria. This consists of small papules, pale or pinkish, at first only perceptible to the touch, distributed especially on the exterior surfaces of the legs and arms, but also involving the trunk. Under the influence of scratching these papules become inflamed, excoriated, and crusted. Later on the skin becomes pigmented, dry, and thickened, the lines of the skin are deepened, and the appearance is typically that of "lichenification" of the affected area. The neighbouring lymphatic glands become enlarged. The clinical picture is complete by the second or third year of life, but the disease usually persists for many years, or even, in severe cases, until the patient's death, influenced but little by treatment.

DIAGNOSIS.

In making a diagnosis of the cause of itching the age of the patient is an important factor.

In *children*, the most common causes are urticaria, scabies, pediculi, and ascarides. The presence of papules and wheals, the history of the lesions appearing "as if the child had been stung with a nettle," are diagnostic of urticaria, while the distribution of a scabies eruption, the presence of "burrows" on the hands and wrists, and the identification of the acarus leave no room for doubt. Thread-worms are a frequent cause of pruritus ani in children, and when these have been got rid of the itching will be found to disappear.

In *adults*, especially among the poorer classes, scabies is also a very common cause of itching. The lesions are vesicular, pustular, or occasionally bullous, irregularly grouped, extending from the sternum to the knees in front, and posteriorly involving the buttocks and lower part of the

back. Between the fingers, on the wrists and umbilicus, numerous small vesicles are intermingled with the typical dirty track or burrow along which the acarus has made its way after entering the epidermis. This burrow contains the eggs and excrement, and at the distal end the acarus itself, which may be made out with a lens as a greyish pearly body. On the proximal side of the acarus is often a small vesicle, and in extracting the acarus it is wise not to open this vesicle. It is only the female acarus which is found in a burrow, and it remains there until its death, a period of a month or two, depositing eggs which become hatched out as the oldest are brought nearer the surface by the fraying away of the superficial layers of the epidermis. With the point of a needle it is easy to pick out the acarus, or the burrow may be excised entire for the purposes of diagnosis with a tenotomy knife, or even the demonstration of the presence of the ova is sufficient proof of the nature of the disease. In addition to the essential lesions of scabies there are usually numerous secondary lesions, partly scratch marks, partly due to staphylococcal infection superadded. Ruptured vesicles, scabbed patches, and superficial hæmorrhagic lesions are distributed irregularly over the trunk and arms, but the face is very seldom affected.

Although, of course, destruction of all the acari and eggs necessarily cures scabies, patients often complain of itching for some time afterwards, and one has seen mentally unstable patients who maintain that they still have scabies years after they have been cured. But these are rather cases of scabies of the brain than of the skin. In other persons the itching persists because the sulphur or other substance used to kill the acari has, through being used for too long a time, set up a dermatitis which is hardly less irritating than the original disease.

Urticaria is also a cause of itching in adults; eczema, of course, is only too common, but perhaps the two diseases which may cause the most intense itching are the less common affections of the skin, mycosis fungoides and lichen planus. Only recently I showed here the case of a man with mycosis fungoides whose life was made absolutely miserable by the irritation, not only when the disease was fully developed and there were fungating tumours, but also in the premycotic stage when there was only an ill-defined pinkish dermatitis. Similarly in lichen planus the itching may be intolerable, especially in patients who are highly strung neurotic, or neurasthenic. The small number of papules and the apparent slight intensity of the lesions seem to be no criterion of the amount of irritation which they suffer, and the consequent insomnia and want of rest may have a most serious effect on their general health, leading even to suicide.

In adult patients suffering from pruritus, when no signs of pediculi, scabies, lichen planus, or other skin lesions can be found, it is most important to examine the urine for sugar. The onset of diabetes in many patients is very insidious, and one of the earliest symptoms may be a passing attack of pruritus which is at first relieved by a sedative application, only to recur in more severe form when the diabetes has thoroughly undermined the patient's health. This might have been avoided and the disease checked or cured if sugar had been found at first and a strict diet ordered.

In *old* persons any of the previously mentioned causes of pruritus may occur, but there is a cause of itching which is almost peculiar to them, and that is phthiriasis. That it occurs among the poor and neglected is of course well known, but even among the well-to-do it is not uncommon. Many people of advanced age become careless of personal cleanliness and appear to have a strong disinclination to baths. Moreover, they feel a greater need of warmth than the young and strong, and frequently sleep in their vest under their night attire, so the pediculi are a source of irritation both by day and night. In such individuals the skin is dry and deficient in secretion, and appears to be especially susceptible to the attacks of the insect. The scratch marks are at first most marked on the shoulders and upper part of the back and chest, but may become generalised, and are intermingled with the hæmorrhagic points caused by the bites of the pediculi.

TREATMENT.

Before deciding on the treatment appropriate to any case it is necessary to determine whether it is one of primary or secondary pruritus. No case can be regarded as a true primary pruritus until all possible causes of external irritation have been eliminated. If after very careful examination no such causes can be found, inquiries must be made as to how far the patient's mode of life transgresses the usual hygienic principles and whether there is any evidence of diabetes, gout, or intestinal disease, as shown by investigation of the urine and blood and general physical examination. Any circumstances which might predispose to, or determine the onset of, pruritus must be inquired into, and the patient's diet and mode of life regulated accordingly. In almost every case alcohol, tea, and coffee must be forbidden, also rich and highly seasoned dishes. Some patients find relief from a vegetarian diet with plenty of milk, or, in default of this, they should live chiefly on poultry, green vegetables, and milk puddings, with plenty of Salutaris or slightly alkaline mineral waters. Rest and absence of worry have a favourable effect on neurotic patients, and it is often wonderful how much good a few weeks in bed or in a nursing home will do. Some pruritics are benefited by a change to the country or the mountains, or to a spa like Royat or Aix-les-Bains.

Internal treatment should begin by giving preparations of salicylic acid; salol, sodium salicylate, and salophen may be given alone or in combination with antipyrin or antifebrin or phenacetin. Carbolic acid in pill form is successful in some cases, arsenic and atropine may be tried, and pilocarpine (10–20 drops of a 1 per cent. solution) occasionally gives good results. But greater success is usually obtained with sedatives, especially bromide of sodium in combination with cannabis indica, or tincture of aconite with tincture of gelsemium. In more severe cases where insomnia is a marked symptom hypnotics are necessary—sulphonal, trional, chloral hydrate, or medinal.

External treatment must, however, always be employed in addition to internal remedies, and one of the simplest and most effectual applications is an evaporating lotion. Equal quantities of eau-de-Cologne and water applied on lint, which is kept moist with the liquid, or lavender water dabbed on every few minutes, often afford great relief, especially if preceded by hot applications. Sponging with hot water, as hot as can be borne, with or without the addition of bicarbonate of soda, or a hot bath, or better still a vapour or Turkish bath, causes dilatation of the capillaries of the skin, and the subsequent constriction of these vessels caused by cooling or evaporating lotions is not only more complete, but also induces a more lasting cessation of the itching. The addition to a hot bath of oatmeal is usually beneficial; or, still better, half a pound of gelatine made into a jelly with warm water and then added to the bath; or one pound of starch worked into a smooth paste with cold water and boiled, or half to one pound of linseed. Creosote and sulphurated potash are somewhat objectionable to sensitive patients, but the sulphaqua powders are a convenient method of making a sulphur bath which is not unpleasant. A combination of sulphur and pine oil bath is obtained by dissolving piutinol in the bath, and it gives good results. Of cooling lotions the simplest is one containing 2 drachms of liquor plumbi subacetatis to 1 ounce of lavender water and 7 ounces of distilled water. One containing hydrocyanic acid, which is very successful, is the following: dilute hydrocyanic acid ℥iss., spirit of rosemary ℥i., glycerine ℥ss., water to ℥x. Carbolic acid made up in the strength of ℥i. to ℥x. of water, with the addition of ℥ss. glycerine and ℥ss. eau-de-Cologne, gives a useful lotion, and, if necessary, to any of these lotions ℥ii. of cocaine may be added to give a greater anti-pruritic effect.

The best way to apply these lotions is to soak a single layer of lint or linen with the lotion, lay it lightly on the itching surface with no covering over it, and sprinkle or spray on fresh lotion every five minutes so as to keep the lint thoroughly moist.

Alkaline lotions, consisting of either ℥ii. bicarbonate of soda, ℥ii. carbonate of potash, or ℥i. borax to ℥viii. water, are all useful for cases where large areas of skin are involved, and the addition of a little menthol will increase the effect. Ichthyol ℥ss., sodium bicarbonate ℥iss., spirit of lavender ℥ss., water to ℥viii., is a lotion which often gives relief and may be used for weeks without harmful effects.

For general pruritus, ointments, sprays, paints, and varnishes are rarely suitable, but they all find their uses in

the localised forms of pruritus of which I am now about to speak.

In pruritus genitalium, and especially pruritus of the vulva, the hygienic and dietetic rules, already discussed in detail, must be adhered to. In the more usual cases of pruritus vulvæ, where there is a uterine or vaginal discharge, strict cleanliness must be enjoined with plentiful use of soap and water and douches of 1 in 5000 potassium permanganate or 1 in 5000 perchloride or 1 in 1000 zinc sulphate. After this a vaginal tampon must be inserted and the external parts covered with Lassar's paste containing 1 per cent. silver nitrate or lenigallol. An ichthyol ointment or paste may be substituted or an ointment containing 30 minims of chloroform to 2 ounces of lard, or the ordinary aconitine ointment. An ointment which often gives good results is the following: chloral hydrate, menthol, and camphor āā gr. 45, lanolin and vaseline āā ʒss. The advantage of using an ointment is that the parts are protected from the action of any discharge which, in spite of the tampon, comes in contact with them. In my experience fluid solutions of menthol or carbolic acid usually cause intense smarting and soreness in these cases, and so do many spirit applications. The addition of cocaine in the strength of 5 per cent. is often advantageous and may be combined with oil of cade or anthrasol in the form of an ointment.

The more inveterate cases respond well to applications of a Paquelin cautery, to excision of kraurotic skin areas, or to turning up a flap of skin all round the vulva, and division of the afferent nerve fibres. In cases of diabetes the patient must be strictly dieted, and, if the urine cannot be always drawn off with a catheter, the vulva should be covered with some protective sedative dressing in the form of an ointment or soluble varnish. One of the best of these latter is unguentum casein with the addition of 2 per cent. ichthyol or 1 per cent. tar. Casein ointment is composed of alkali caseinate, glycerine, vaseline, and water, and forms a thick white emulsion which dries on the skin in a minute or two, forming an elastic, dry covering, which is readily washed off. On the one hand, it is porous enough to permit of evaporation; on the other, it contains fat which helps the added ichthyol or tar to make its way deeply into the tissues. It is therefore more than a protective varnish, and holds a position intermediate between the ointments on the one hand and the pastes and powders on the other. Methylene blue given in pill form, one grain night and morning, with a paint of methylene blue, four grains to the ounce, applied at frequent intervals, has the objection that it stains the urine blue, but if this does not contain sugar the treatment is often successful.

Pruritus of the anus is usually accompanied by some secondary eczema with the formation of rhagades and thickening of the skin. This thickening must first be got rid of, either by 3–5 per cent. salicylic ointments and plasters, or by daily applications of diachylon ointment. When the induration has diminished, the rhagades and excoriations have healed, and any hæmorrhoids present have been removed, an ointment of liq. carb. det. ʒss. to ung. conii ʒi. will relieve the itching. Or creosote ʒss., tinct. aconiti ♏x., adipis ʒi.; or tinct. aconiti ♏iii., zinci oxidi ʒss., calomelanos ʒss., ol. rosmarin. ♏x., vaselin. alb. ʒi. These ointments are best used at night, bathed off in the morning with some olive oil, and the following powder applied: chloral hydrate, camphor āā gr. 40, starch ʒi. A 20 per cent. solution of ichthyol painted on frequently gives relief, and I prescribe with success this paint: ol. cadini ʒi., spt. coloniensis ʒss., aq. dist. ʒi., tinct. quillaiæ q.s. ut fiat emuls. Equal quantities of lime-water and black wash make an excellent application, or chloroform ʒi. to sweet almond oil ʒi., followed by a zinc oxide and calamine powder. Small enemata of half a drachm of medinal to an ounce of water, or 5 per cent. ichthyol in very hot water, may be alternated with suppositories of cocaine, morphia, or medinal, taking care that there is a regular action of the bowels at least once a day.

While speaking of suppositories, I do not wish to be taken as recommending morphia and cocaine suppositories to be taken regularly over long periods of time; indeed, I discontinue their use in any particular case as soon as possible; but as a temporary measure they are to my mind of the greatest service. It must be remembered that many patients scratch quite unconsciously during their sleep until the cutaneous nerves have been numbed by the vaso-motor dilatation and exudation. And this in spite of any dressings which may be applied unless they are fixed very tightly in position. Such scratching may undo the whole benefit of the treatment employed during the day, and leave an excoriated and inflamed surface which takes some time to heal up. The dry skin of the aged is especially susceptible to such ill-treatment, and these patients also sleep less soundly than the young and robust. In such cases I do not hesitate to give morphia or other suppositories, at any rate when they first come under treatment, with the greatest benefit to the patient.

In the most obstinate cases a rapid application of the actual cautery to the most irritating areas often causes great amelioration of the symptoms. Application of the high frequency current with a glass electrode is occasionally successful, and cases frequently react well to two or three ½ pastille doses of X rays at intervals of a week. The action of X rays on pruritus is not easy to explain, but I have seen cases which resisted all other treatment cured, at least for a time, by this means.

A more permanent cure, and one to be recommended in those intense cases when life has become a misery, is that of surgical operation. Such operations all aim at division of the cutaneous afferent nerves, and if this is done the area supplied is, of course, rendered temporarily anæsthetic. Sensation recurs in from three weeks to a month, but the pruritus does not return for years, if at all, in that area. In Ball's operation incisions are made on either side of the anus and flaps are turned up, leaving a small pedicle of skin which is undercut, as also is the skin in an outward direction. The flaps are separated up to the white line, but the hæmorrhoidal vessels are only slightly interfered with, so that there is no sloughing. The results of this operation are excellent, and for really serious cases it may be strongly recommended.

Time does not permit of my dealing with the treatment of all the diseases of the skin individually which are accompanied by itching, and I need only say that the treatment in every case must be primarily that of the skin disease and only secondarily that of the pruritic symptoms. In mycosis fungoides and some cases of lichen planus these symptoms may be so severe as to overshadow everything else, and under these circumstances it is necessary to resort to some of the principles and remedies which I have already fully discussed under the heading of pruritus. And by the choice of suitable treatment and attention to detail success will be attained, rather than by the employment of the latest and most extensively advertised new drug.

UNIVERSITY OF SHEFFIELD.—The Council at its last meeting made the following appointment: Mr. Alexander Wilson, M.B., Ch.B. Aberd., to the post of demonstrator in anatomy. The Council received the following resignation: Mr. A. Garrick Wilson, F.R.C.S. Eng., as honorary demonstrator in anatomy, in consequence of his appointment to the tutorship in surgery in the University. Mr. H. K. Stephenson was appointed representative of the University on the West Riding County Association.

PRESENTATIONS TO MEDICAL MEN.—Mr. James Waterston, L.R.C.S. Edin., who is the oldest medical practitioner in Sunderland, has been presented with an illuminated address, a specially designed arm-chair, and a smoker's outfit from the staff and committee of the Sunderland Provident Dispensary. Mr. Waterston is one of the medical officers connected with the institution, and for 14 years occupied the position of vice-chairman. For the past 14 years he has acted as chairman.—Mr. W. H. M. Barclay, M.B., C.M. Edin., who is Provost of Grantown, was on April 23rd presented by his patients and friends with a handsome motor-car and a cheque for £241 in recognition of his faithful and untiring services as a medical man in the town and wide district over which his patients are scattered. Mrs. Barclay was also presented with a silver salver bearing the inscription: "Presented to Mrs. Barclay on the occasion of the presenting of a motor-car to Dr. William Barclay, Provost of Grantown-on-Spey, as a tribute of public esteem and in recognition and appreciation of his public services and self-sacrificing labours as a trusted and skilful physician doing 30 years' strenuous professional work in Strathspey. April 25th, 1910."

THE PRACTICE OF WASSERMANN'S REACTION FROM THE QUANTITATIVE STANDPOINT.

BY BERNARD KLEIN, B.A., M.B. OXON.

THE object of this paper is to describe the examination of cases of syphilis by Wassermann's reaction from a special point of view—namely, the degree to which the sera of different cases react, and to indicate the probable advantages of this procedure in the practical application of the test. The cases examined from this special point of view are 41 in number and form part of a series of about 200 examined by a uniform routine method. Of these 200, about 120 had had, or were suffering from, syphilis, and about 100 gave a positive reaction.

Technique.

1. *Antigen or extract.*—1 gramme of guinea-pig's heart, washed free of blood and finely divided, was pounded up in 20 c.c. of alcohol. Fresh extract was made at least once a week, always in the same way, and kept in the dark at 0° C. This alcoholic extract was diluted for use in normal saline solution, 1 in 10. A watery extract of human syphilitic liver was also used in addition to the above for testing 11 cases, some syphilitic and some non-syphilitic, and both methods gave identical results.

2. *Complement.*—Guinea-pig's serum, not more than 24 hours old, diluted in normal saline solution, 1 in 10.

3. *Patient's serum.*—Heated at 56° C. for half an hour, and diluted in normal saline solution, 1 in 10.

4. *Sheep's blood corpuscles.*—The washed corpuscles were mixed with normal saline solution in 5 per cent. suspension.

5. *Rabbit's serum hæmolytic for sheep's corpuscles.*—The greatest dilution at which the serum caused complete hæmolysis with the amounts of complement and sheep's corpuscles used in all the tests was, in fresh samples, from 1 in 100 to 1 in 150. This point of highest dilution gradually diminished with keeping, and was ascertained from time to time. In carrying out the tests a dilution was always employed considerably lower than was requisite, generally 2- to 3-fold lower. The object of this procedure was to make sure of obtaining complete hæmolysis wherever fixation of complement had not taken place, the hæmolytic system being merely indicative and not concerned in the quantitative aspect of the test.

Routine test.—1-10th c.c. of each of the five factors enumerated was employed.

For each serum to be tested there were two tubes, one with complement and serum alone, the other with complement and serum plus extract, the former serving as a control. One tube containing complement and extract alone served as a control for the whole series.

For the first part of the experiment (fixation of complement) 1¼ hours at 37° C. was allowed. Hæmolytic serum and sheep's corpuscles together with ½ c.c. of normal saline solution were then added to each tube. The experiment was considered to be complete when all the controls showed complete hæmolysis—usually after the lapse of 25–30 minutes.

This routine method served as the basis for the further quantitative estimations. Of the sera which gave a definitely positive reaction as many as was convenient were selected and further examined by the quantitative tests in the following manner.

Method A.—Measurement of the degree of the positive reaction by finding the amount of complement absorbed.

Keeping the amounts of extract and serum 1-10th c.c., increasing doses of complement were used—2-10ths c.c., 3-10ths, and so on. A serum with which complete fixation still occurred with 3-10ths c.c. of complement, but partial or complete hæmolysis with 4-10ths c.c., absorbed three times its own bulk, or 3 "doses" of complement. It is in this sense that the word "dose" is used in Table I.

A method of testing with increasing doses of complement, differing in detail from the foregoing, was described by Dr. Ivy M'Kenzie in the *Journal of Pathology*.

Method B.—Measurement of the degree of positivity by finding the highest dilution of the serum at which it gave a positive reaction.

Keeping the amounts of extract and complement 1-10th c.c., 1-10th c.c. of the patient's serum was used, but its dilution, in place of the usual 1 in 10, was made progressively 1 in 15, 1 in 20, 1 in 30, and so on.

Elimination of two possible sources of error.—A certain amount of complement is absorbed by extract alone, or by serum alone, whether normal or syphilitic. To see to what extent such absorption occurred, tests were made on several occasions with different sera and different complements. The exact details of these minor tests need not be described, but it was found that of the extract 4-10ths c.c. or even 5-10ths did not completely absorb the 1-10th c.c. of complement, in the presence of which they had been kept at 37° C. for an hour or more; of serum, the amount that could be taken was almost always at least 5-10ths c.c. One may conclude that no great importance attaches to the amounts of complement absorbed by extract or serum, especially of the latter, in Method B, with increasing dilutions of serum.

A second point to be considered is whether the complement in the serum of different guinea-pigs varies markedly as to the amount of it required to effect hæmolysis with a standard hæmolytic system. On ten or more occasions the guinea-pig complement was tested in this respect, and it was found that complete hæmolysis occurred generally with 0·003 c.c. (3-100ths c.c. of the 1 in 10 dilution); occasionally 0·004 c.c. was needed.

With regard to any variation between different samples of complement as to the readiness with which they are absorbed by extract and serum separately, or by different combinations of sera and extract, the former point has already been considered, whilst, as regards the latter, it may be mentioned that the two quantitative methods already described were carried out with two sera, using the complement of two different guinea-pigs with identical results.

Results.

Method A.—Method of increasing doses of complement. The cases and the "doses" of complement absorbed are shown in Table I. 1+ signifies five doses at least.

TABLE I.

—	Absorbed 1 dose.	Absorbed 1½ doses.	Absorbed 2 doses.	Absorbed 3 doses.	Absorbed 4 doses.	Absorbed 5 doses.
6 cases of chancre or chancre and rash	1	3	2	—	—	—
6 cases of secondary syphilis ...	2	1	1	2	—	—
7 cases of tertiary syphilis ...	—	3	2	1	1	—
5 cases of congenital syphilis...	—	—	3	—	1	1+
2 cases of general paralysis ...	—	1	1	—	—	—

Of these cases, amongst congenital syphilis the most intense reaction was found.

The next place is occupied by severe tertiary lesions. The case which absorbed four doses was a woman, aged 24 years, who had numerous gummata about the face and neck, with deep ulceration and laryngitis, and presented a picture of very severe syphilis. The two cases of secondary syphilis that absorbed three doses were both suffering from eye affections, one from iritis (three years after infection), the other from interstitial keratitis. The majority of early cases do not absorb more than one and a half doses.

Method B.—Examination of the dilution up to which the serum gives a positive result. The cases examined by this method and the highest dilution at which they gave a positive reaction are shown in Table II.

TABLE II.

Dilution at which + ...	1 in 10.	1 in 15.	1 in 20.	1 in 30.	1 in 40.	1 in 60.	1 in 100 +
3 cases of chancre and rash	1	—	1	—	1	—	—
4 cases of secondary syphilis	2	1	—	1	—	—	—
8 cases of tertiary syphilis...	2	—	2	1	2	1	—
4 cases of congenital syphilis	—	1	1	1	—	—	1
1 case of general paralysis	—	—	—	1	—	—	—

The case with which a positive result was obtained in a dilution of 1 in 100 (at least) was a female aged six months; there were active signs of syphilis both in mother and child. The case that gave a positive result at 1 in 60 is the female, aged 24 years, with severe tertiary lesions above alluded to. The case of secondary syphilis giving the reaction when diluted 1 in 30 is an untreated case that had contracted the disease four months previously. One case included under secondary syphilis should readily be classed as cured or "latent," having received seven injections of mercury six months ago and showing no signs. This case was positive only in 1 in 10 dilution. One case only had the primary sore (of four weeks' duration); it was positive only at 1 in 10 dilution.

Table III. shows five cases tested by both methods, A and B.

TABLE III.

Nature of case.	Method A.		Method B.
Sore and rash	2 doses of complement absorbed.		+ with dilution 1-40
Mucous tubercles ...	1 dose	ditto.	,, ,, 1-15
Tertiary syphilis ...	4 doses	ditto.	,, ,, 1-60
Aneurysm	1½ ,,	ditto.	,, ,, 1-30
General paralysis ...	2 ,,	ditto.	,, ,, 1-30

This comparison of Methods A and B indicates that the latter is the more delicate test as to the degree to which the reaction is obtained with any serum. A minor advantage consists in the circumstance that it can be carried out with a much smaller amount of the patient's blood than can the former.

Advantages of the Quantitative Method of Increasing Dilutions.

1. It provides a means of stating the intensity of the reaction in simple terms, intelligible to one ignorant of the details of Wassermann's reaction—viz., serum positive in dilution of 1 in 20, 1 in 30, &c.; just as is done in other serum reactions, such as Widal's test.

2. The results given above, although not numerous, seem to warrant certain conclusions as to the degree to which a positive result is obtained with sera in different forms of the disease. The average case in the early stages is positive at about 1 in 15. Some of the cases many years after infection still retain a trace of the taint without having marked signs; most of these give a positive reaction of slight degree. Congenital syphilis as a rule gives an intense reaction. Similarly, as regards the amount of complement absorbed in the method of increasing doses, the degree attained seemed in a good number of cases to be proportional to the severity of the disease. Now a positive Wassermann reaction obtained in a patient suffering from an obscure disease may or may not explain the nature of that malady. Syphilis in the past history of such a patient may be a mere coincidence, sometimes a misleading coincidence. This might be the case if the positive result were given only in low dilution, but with a positive result at 1 in 30 or 1 in 40 it would be much more probable that the disease in question was syphilitic.

3. The quantitative method would probably give more assistance than the ordinary routine test in judging of the improvement and prognosis in a case under treatment. For example, a severe case, having given a positive reaction at the beginning of treatment, may still give a positive reaction at a later stage, although improvement is occurring; whereas, if the degree of positive reaction be measured, the serum may be found at successive examinations to be giving the reaction in lower and lower dilutions. The writer has not had the opportunity of testing the serum of *the same patient* at successive stages of improvement; but positive reactions, occurring only in low dilutions of the serum, were obtained in several cases treated for varying periods—some of them improved or almost cured; and these patients had suffered from marked syphilitic lesions, gummata, for example, which, when still active and progressing, generally are associated with a positive reaction of marked degree.

The suggestion is offered that the Wassermann reaction should be made a uniform standard test, with amounts based, for choice, on the decimal system, and that, taking 1 in 10 as the lowest dilution for the serum to be tested, the degree of positive reaction be stated in terms of the highest dilution at which a positive result occurs—1 in 20, 1 in 30, and so on, or more simply, 1, 2, 3, &c., degrees or units of positive reaction.

It should be added that the technique of the routine method described in the beginning of this paper is practically that of Wassermann's original method, and is that adopted in the Pathological Department of St. Bartholomew's Hospital by Dr. M. H. Gordon, to whom the writer's thanks are due for advice and encouragement.

PRELIMINARY NOTE ON

THE COMPARATIVE VALUE OF THE VARIOUS METHODS OF ANTI-SYPHILITIC TREATMENT

AS ESTIMATED BY THE WASSERMANN REACTION AND CLINICAL OBSERVATION.

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THE technique of the Wassermann reaction as first described being a somewhat lengthy and complicated one, it has naturally followed that a very large number of "simplified" methods have been brought forward by numerous observers. Fleming has suggested a modification of Hecht's and Bauer's techniques, which he claims gives equally good results to the original, and which is simple and easy to work; but other observers, including ourselves, have not succeeded in obtaining as satisfactory results with his technique as with the original as modified by one of us, and the general consensus of opinion is in favour of the original compared with any simplified one. Noguchi, and later von Dungern, advocate the use of complement and hæmolytic antibody dried on filter paper, but the question as to the rate of loss or alteration of complemental content has not yet been sufficiently worked out to enable us to use this method with confidence that the results will be reliable.

The clinical value of Wassermann's test is twofold: (1) it assists us to arrive at a diagnosis; and (2) it gives us a rough indication of the progress made under treatment.

Syphilis, like all other diseases, varies in its virulence and the length of time required for its cure according to the individual attacked. Some individuals recover without any treatment at all; in others a short course of mercury is probably sufficient. The majority, however, require a treatment extending over two or three years, and some require a long treatment of five or ten years, and some are never cured.

Without the Wassermann reaction we have no means of judging, in the great majority of cases, as to when cure has taken place. Symptoms have disappeared within a month or two after commencing treatment, after which we have nothing but rule-of-thumb to guide us. In the state of our present knowledge, however, we do not think that it would be justifiable to recommend less than three years' treatment, even if a succession of negative reactions have been obtained, for we know that if treatment is left off too soon a positive reaction will return.

The history of the Wassermann reaction is too recent for us yet to have acquired sufficient data in regard to its value as a guide to permanent and complete cure. Even in a case where a succession of negative results has been obtained after all treatment has been left off, we cannot until another 20 years have passed be certain that the disease is finally and absolutely obliterated and that no late manifestation will ever occur. By its means we have indeed learnt that many cases considered cured were not cured and it is the general opinion that three negative reactions taken at three or six months' intervals, during which no mercury is given can be considered as an absolute cure. We can only say that an opinion based on this evidence is of far greater value than an opinion based only on clinical or rule-of-thumb ground, but we cannot yet be certain that such an opinion would invariably be correct. Too much reliance should not be placed on a solitary negative reaction for the exclusion of syphilitic infection.

We have endeavoured to find out by means of the Wassermann reaction the comparative value of various antisyphilitic drugs and the method of their administration, and although our series is short and incomplete we think that perhaps this preliminary note of the results obtained in 231 cases may be of interest. Our work on this subject has only extended over a few months, and the results obtained must necessarily be inconclusive.

Pill treatment.—Of 138 cases treated with pills 66 had received under six months' treatment, and of these 62 gave a positive reaction (94 per cent.). The proportion of negative reactions, therefore, was not higher than would be expected in untreated cases. We therefore conclude that under six months pill treatment has no effect on the Wassermann reaction. After this period, however, the effect of mercury is clearly shown. Of 33 cases that had received from six months to a year's treatment 19 were positive (57 per cent.) and 14 negative. Of 25 cases that had received 18 months' treatment 10 were positive (40 per cent.) and 15 negative.

Injections.—Of 25 cases treated with calomel injections which had received 12 injections at weekly intervals 22 were positive (88 per cent.) and 3 negative.

Inunction.—Of 16 cases of inunction treatment all were positive.

Suppositories.—Of 15 cases treated with mercurial suppositories all were positive.

Potassium iodide.—Of 20 cases treated for a month with large doses of potassium iodide all were positive.

Arylarsonates.—Of 15 cases treated with one course of 10 injections of 10 grains of arylarsonates only one gave a negative result at the conclusion of the treatment. Colonel F. J. Lambkin, R.A.M.C., however, states that a negative reaction is obtained after several courses of treatment with the arylarsonates extending over the period of a year.

The above results were obtained when only one strength of complement (1 in 10) was used. For the last three months, however, we have followed Captain Harrison's method of using two amounts of complement, 1 in 10 and 1 in 5, and so have been able to arrive at a roughly quantitative estimation of the complement-fixing power of the serum. We have examined 93 sera in this way with the following results.

Pill treatment.—Of 32 cases that had received under six months' pill treatment 30 were positive with both doses of complement (94 per cent.) and 2 were positive with the smaller dose, but showed some hæmolysis with the larger dose (6 per cent.). Of 11 cases that had received treatment of from six months to one year 3 were positive with both amounts of complement, 6 were positive with the smaller amount, but showed some hæmolysis with the larger amount, and 2 showed hæmolysis with both amounts of complement—i.e., 70 per cent. showed the effect of mercurial treatment. Of 7 cases that had received 18 months' treatment, 1 was positive with both amounts of complement, 4 were positive with the smaller, but showed some hæmolysis with the larger amount, and 2 showed hæmolysis with both amounts of complement—i.e., 86 per cent. showed the effect of treatment. In other words, of the 17 cases which had received over six months' treatment only 3 showed hæmolysis with the smaller amount of complement, whereas 14 showed hæmolysis with the larger amount of complement—i.e., 83 per cent. showed influence of treatment. All those showing a positive result with the smaller amount of complement are active syphilitics, but the fact that so many of these showed some hæmolysis with the larger dose of complement indicates in our opinion that they were getting under the influence of the drug, for without treatment the larger amount of complement is nearly always fixed. The fact that 94 per cent. of those which had received under six months' treatment were equally positive with both amounts of complement confirms our original finding that under six months pill treatment has practically no effect on the Wassermann reaction.

Inunction.—Of 11 cases of treatment by mercurial inunction, all under three months' treatment, 2 were positive with both amounts of complement, and 9 were positive with the smaller amount, but showed some hæmolysis with the larger amount—i.e., 82 per cent. showed effect of treatment, therefore, and this after only three months.

Injections.—Of 17 cases that had received 12 injections of calomel 11 were positive with both amounts of complement, and 6 were positive with the smaller, but showed some hæmolysis with the larger amount; 35 per cent. therefore showed effect of treatment.

Suppositories.—Of 14 cases treated with suppositories for under six months, only 3 (21 per cent.) showed any effect of treatment.

These figures are, of course, too small to prove anything, but it is suggestive that 82 per cent. of inunction cases show effect of treatment in three months, whereas only 6 per cent. of pill cases show any effect of treatment in six months, and the conclusion would seem to be that inunction is the most rapid method of getting the patient under mercury, that calomel injections are second, and that pills and suppositories are a long way behind.

We are entirely satisfied as to the great value of the Wassermann reaction from the diagnostic point of view, such clinically doubtful cases that gave a positive reaction always showing later either by their reaction to mercurial treatment or by the development of clinical symptoms that they were syphilitic. In so far as we have gone at present in regard to treatment also the pathological evidence as estimated by the Wassermann reaction and the clinical evidences seem, in the great majority of cases, to go hand in hand.

We wish to express our indebtedness to Dr. Charles Slater, director of the Clinical Laboratories at St. George's Hospital, where the pathological work connected with this paper was carried out.

PUBLIC HEALTH AND THE NORFOLK SCHOOLS.

Mr. F. H. Millington, chairman of the Education Committee of the Norfolk County Council, attended a meeting of the Norfolk County Association of the National Union of Teachers held at Norwich on April 16th, and gave an address on Public Health Administration and Education. Mr. Millington said he thought the most important work that county, town, and district councils had to do at the present time was to complete if possible the organisation of public health administration. Most of what he had to say related to medical inspection. Over a thousand men were now engaged in the school medical service, many hundreds of them being full-time appointments, as well as several hundred nurses and women health visitors. In the county of Norfolk more than two-fifths of the school children had been medically inspected. The results of these inspections might be roughly summarised as follows: 25 per cent. of the children may be said to be all right, 75 per cent. had something requiring medical attention, 17 per cent. of these needing treatment as early as possible. The defects discovered justified the institution of medical inspection. Each child was to be examined three times during its school career—at its entrance, half-way through the course, and on leaving. The parents were notified if anything serious was found, and special cases were examined oftener if required. The principle underlying the whole scheme was the recognition that, after all, one of the best endowments a working man or woman can have is sound health, and that the foundations for this must be laid in childhood. It could not be yet stated what the cost of medical inspection per head in Norfolk was, but taking the whole country it had been estimated approximately as 4¾*d.* per child and in urban districts up to 7½*d.* per annum. The teachers had willingly and cheerfully given their help and no difficulties had been raised by the parents. In Norwich as many as 67 per cent. of the mothers had attended the inspections. With the sanction of the Local Government Board local education authorities may and ought to arrange for medical treatment. The Norfolk county council had agreed to allow a sum of £200 to be spent during the current year for this purpose. About 25 per cent. of the parents had voluntarily done what was medically advised. Dr. J. T. C. Nash, medical officer of health of Norfolk county, in the course of an address which followed, stated that the coöperation of the teachers had been beyond praise and had been testified to by the medical officers. Parents were welcomed at the medical inspection of their children because it was desired to stimulate a sense of duty in mothers with respect to the health of their children. Dr. Nash went on to speak of the importance of "tooth-brush drill," and urged that children should be taught to use the tooth-brush at least three times a day. Mr. Arnett, President of the Norfolk County Association of Teachers, said he believed one result of medical inspection would be that the curriculum of the schools would be lessened and more time would be devoted to cultivating the health of the children.

PROGRESSIVE DESTRUCTION OF THE TEETH SOCKETS: CHRONIC GENERAL PERIODONTITIS.

(PYORRHŒA ALVEOLARIS, ALVEOLAR OSTEITIS, INTERSTITIAL GINGIVITIS.)[1]

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IN the following remarks on periodontal disease it is intended to draw attention to the following points: (1) the morbid anatomy of the disease; (2) the clinical appearances and symptoms; and (3) the relation of the clinical appearances to the destruction of the bone.

Morbid Anatomy.

If specimens of human maxillæ which show this disease be examined the first change noticed will be the disappearance of the bone between the teeth, leading to the formation of spaces (Fig. 1).

The next stage is marked by further destruction of the bone, the whole tooth socket being gradually involved. The bone immediately bordering the tooth disappears first, and so produces cup-like spaces around the teeth. The condition of the bone to the naked eye then presents the appearance of osteoporosis or rarefying osteitis (Fig. 2).

In specimens showing more advanced stages the bone forming the tooth sockets will be found almost destroyed, affording but slight hold for the tooth.

In the maxilla, especially in the region of the molars, the bone is more involved in the disease than is the case in the mandible. This is to be accounted for by the different nature of the osseous tissues in these two bones. Irregular patches of calculus will often be seen on the teeth near the necks, and at times the surfaces of the roots will be found completely covered with an irregular dark-brown deposit. In some specimens the extent of the changes around the teeth appears to be slight, the margin of the alveolar process having receded, but the bone itself presenting a sclerosed rather than an osteoporotic condition. In these specimens, too, a considerable thickening of the outer alveolar plate will at times be noticed (Fig. 3).

In animals that have been the subjects of this disease exactly similar changes are to be found in the bones, but the teeth show greater deposits of calculus owing to the absence of the system of artificial cleaning adopted by human beings, and recent specimens will often show the spaces between the teeth choked up with food débris. The following specimens show the different stages of the disease in animals.

Fig. 4 shows the skull of a Chinese palm-civet (*paradoxurus larvatus*), and shows the cupping of the sockets the result of rarefying osteitis.

The next specimen (Fig. 5) is one from a Panolia deer (*cervus eldii*); the condition is chronic and the destruction is most marked in the region of the molars where the force of mastication is greatest.

The next specimen (Fig. 6) is that of an ordinary domestic dog, and is a fair example of the deplorable state of the mouths of many of these animals.

Fig. 7 is a specimen from a spotted hyæna (*hyæna crocuta*), and shows very clearly the marked destruction of the alveolar process from rarefying osteitis. This is the stage where the teeth are almost on the point of dropping out.

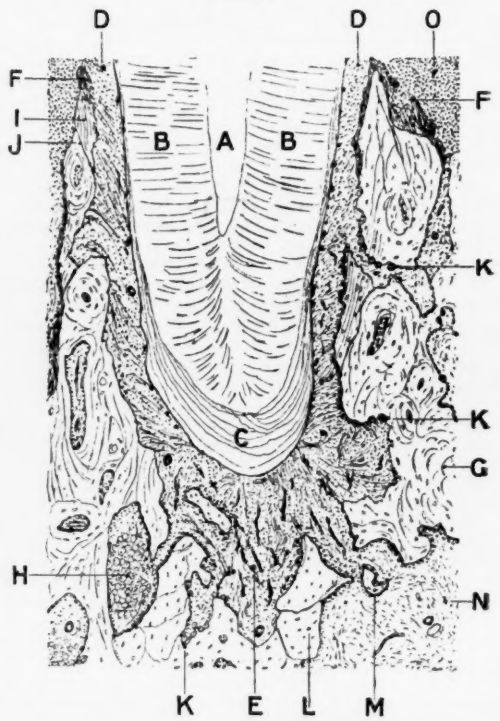
The next specimen (Fig. 8) shows an advanced stage of the disease in a Vervet monkey (*cercopithecus lalandii*).

Microscopical investigation of the tissue in the various stages of this disease has not been carried out to any considerable extent. A useful paper was published by Zoamensky. This author records the result of his examination of sections obtained from a female, aged 39 years, who had suffered from pyorrhœa alveolaris. The patient died of acute anæmia, the result of hæmorrhage after parturition. The decalcification of the preparations was accomplished by means of a 3–5 per cent. solution of trichloracetic acid. Some of the sections were stained with eosine and hæmotoxylin, and others in Löffler's blue, and the sections were afterwards mounted in Canada balsam.

The series obtained showed the progressive development of the pathological process in this case. In all the sections a deposit of calculus was present under the gum margin. The sections showed that the pathological process was of an inflammatory character, originating in the gum, and then successively involving and leading to the destruction of the periodontal membrane and the adjacent bone. The destructive process in the bone near the margin of the socket consisted in decalcification of tissue and transformation first into an osteoid tissue and afterwards into a fibrous intervening tissue with the subsequent infiltration of the latter with leucocytes. In the part of the socket where the bone marrow was present lacunar absorption of the bone was seen. The whole process was of the type of a rarefying inflammation.

Dr. E. S. Talbot has examined the patho-histology of the disease in a series of dogs, and has shown that the earliest manifestation is in the gingival margin, and that with the progress of the disease both the periodontal membrane and the bone become involved. The absorption of the bone is at times quite rapid, and takes place by (*a*) lacunar absorption, (*b*) the formation of perforating canals, and (*c*) halisteresis (disappearance after prior absorption of lime salts). The main features of the condition of the bone are well shown in Fig. 9, a section taken from the human subject.

FIG. 9.



A, Pulp cavity. B, Dentine of tooth. C, Hyperplasic cementum around apex of root. D, Peridontal membrane, greatly thickened—hyperplasic. E, Indifferent tissue at apical region greatly increased in amount. F, Free edge of bone of socket becoming converted into fibrous intervening tissue. G, Bone of socket presenting earliest signs of osteoporosis. H, Large osteoporotic space in bone of jaw filled with bone marrow. I, Bone of socket partially decalcified and converted into osteoid tissue. J, Junction of living with decalcified bone. K, Osteoclasts producing lacunar absorption. L, Bone of jaw only slightly altered by disease. M, Sequestrum undergoing peripheral absorption. N, Soft cancellous tissue slightly changed from normal. O, Inflammation of gum at neck of tooth. (From a drawing by Mr. A. Hopewell-Smith.)

[1] A paper founded on a lecture delivered at the Royal Dental Hospital.

FIG. 1.

FIG. 2.

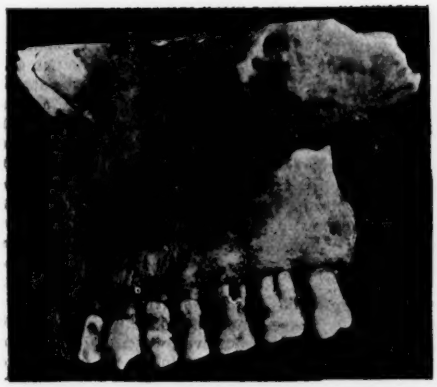


FIG. 3

FIG. 4.

FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.

Clinical Appearances.

In a young adult, where the mouth is in a normal condition, the gums will he noticed to fit closely around the necks of the teeth, the spaces between the teeth being filled with tags of gum. In the earliest stage of the disease there is a slight congestion of these tags of gum, and by passing a probe into the interproximal spaces it can be shown that the gum has undergone a certain amount of destruction. The whole of the margins of the gums gradually becomes congested and bleeds readily. The tags of gum between the teeth then gradually disappear and the normal festoons become obliterated. An examination of the teeth at this stage will usually disclose in the approximal spaces food and other débris, while small nodules of calculus are generally present on the teeth. If the gums are compressed a small quantity of discharge may be seen escaping by the side of the teeth. Finally, the bone becomes involved in the inflammatory process, and, with the peri-odontal membrane, is gradually destroyed, and the muco-periosteum gradually recedes. The recession of the gums does not usually proceed as quickly as the destruction of the alveolar process, with the result that around the teeth deep pockets are formed, and in these pockets pus and other morbid material accumulate and so aggravate the condition.

At this stage the mucous membrane will appear deeply congested, the gums are swollen at their free margins and bleed readily at the slightest touch. The roots of the teeth are more or less exposed, and covered with a layer of hard greenish-brown calculus; there is a *fœtid* discharge, and the breath has a repulsive odour due to indol-forming organisms. A sickly sour odour of the breath is noticeable when yeasts and bacteria causing carbohydrate fermentation are present. The teeth are freely moveable, and may become so loose that they can be removed quite easily. If the disease is left untreated the teeth are lost one by one, and with the loss of the teeth the inflammatory process invariably clears up.

In advanced cases superficial glossitis is often present, and the tonsils and pharyngeal mucous membrane are also inflamed. An unpleasant taste is experienced in the morning. There is constant hæmorrhage from the gums which is swallowed during the day, but at night it occasionally escapes from the mouth and stains the pillow. This latter symptom is worthy of special attention, as it may be mistaken for hæmorrhage from the lungs.

The clinical appearances of the disease, which vary considerably, are determined by the general condition of the patient, the resistance of the tissues, and the hygiene of the mouth. At one period the condition may be acute, with a free flow of pus from the tooth sockets and a rapid destruction of the tissue. This state of evanescence is perhaps followed by a period during which the inflammation may be only slightly marked.

In some cases the teeth are comparatively free from calcareous deposits; in other cases they are completely coated. The disease, too, may be more active around the anterior than the posterior teeth, or *vice-versâ*. Again, the destruction of tissue may be more active in one region of the mouth than another. This is exemplified in the case of the incisors and canines, the destructive process being often more advanced on the palatal than on the labial aspect. In severe cases the disease may spread in the maxilla to the antrum, or in the mandible to the body of the bone.

In some cases where the hygiene of the mouth is carefully looked after the gums appear fairly normal in colour, and abnormal looseness of the teeth is the only indication of the presence of the disease. In these cases the probe discloses deep pockets, and on pressing the gum a discharge can be expressed from the tooth sockets. In a few cases the disease is slow in its progress, and the surrounding bone actively reacts to the injuries caused by the toxic products in the pockets; this is well seen in the case shown in Fig. 3.

In certain cases there seems to be a tendency to the formation of granulation tissue, causing the condition to simulate sarcoma. In one case under observation associated with myxœdema, the gums were friable and presented a translucent appearance.

The disease may often be well advanced without the patient being conscious that anything is wrong, the only symptom being a tendency for the gums to bleed readily, and this is often unheeded by the patient. With the formation of spaces between the posterior teeth, neuralgia, arising from irritation of the exposed cemental tissue, may be present. In the later stages there is often persistent neuralgia owing to the main trunks of the nerves being involved in the diseased process. Where pus formation is active the patient will often complain of a general itching of the gums.

Whether the disease can be transmitted from one individual to another is an open question, but the balance of evidence is rather against it.

In patients of a gouty diathesis, the clinical appearances present certain features which are typical, and in the opinion of some the periodontitis is considered to be closely associated with the uric-acid diathesis. According to these authors, gouty periodontitis seldom manifests itself before the age of 30, and in most cases the patient has reached the age of 45 to 50. There is usually a well-marked history of gout. In the earliest stages there is a gingivitis, the teeth are often free from caries and show signs of well-marked attrition. Subsequently the periodontal membrane becomes involved, causing recession of the gums and absorption of the alveolar process. The mouth may remain in this condition for years.

The margin of the gums often presents a thickened appearance, which is probably due to a productive inflammation of the muco-periosteum. An examination of the sockets with a probe will not disclose any deep pockets or much calculus. At intervals synchronous with a lowering of the standard of general health, the gums will appear congested, a catarrhal-like discharge or even pus may exude from the pockets, and the teeth will become sensitive to pressure, the inflammatory process appearing to involve the whole periodontal membrane; the teeth will be hypersensitive to thermal changes, and the patient will often complain of shooting pains in the region of the alveolar process. The oral condition improves with that of the general health, but the roots of the teeth will be left a little more exposed. The attacks tend to become more frequent as age advances, and one or two teeth during each attack appear to be singled out, as it were, for an extra dose of the specific poison. The inflammation in the tooth or teeth may stop short of suppuration, but even when a general improvement has taken place a distinct looseness of the tooth or teeth persists. During a subsequent attack the tooth becomes extremely loose, and the gum overlying the upper half of the root may become swollen and a fluctuating swelling appear. An incision into the swelling will disclose a glairy, mucus-like fluid, or even pus.

If the swelling is not incised it may break externally, or the fluid may wend its way towards the gingival margin and so discharge at the neck of the tooth. An examination of the tooth will disclose a living pulp. In such teeth a rapid destruction of the periodontal membrane and alveolar process takes place and the teeth become quite loose and are lost. With the advance of years the attacks occur with increasing severity, the teeth becoming loose partly by the destruction of the membrane commencing at the gingival margin and partly by acute exacerbations in one or two teeth as mentioned above.

Radiographs in Relation to Clinical Appearances.

Clinical appearances alone are not altogether satisfactory guides as to the extent of the disease, and it is only by the aid of radiography that the extent of the bone destruction can be estimated with any degree of accuracy. The following cases will serve to demonstrate the amount of bone destruction in relation to the clinical appearances.

In Fig. 10 is seen the mandibular incisor region of a girl aged 15 years. The gums were normal in appearance, with the exception of the gingival margins around the median incisors and the left lateral and canine, where the gums were inflamed and the interdental papillæ slightly thickened. Examination with a probe at these points showed the presence of slight "pockets." The radiographs (Fig. 11) show the alveolar process to be normal with the exception of the lower incisor region, where the septa between the teeth have been partially destroyed.

The case shown in Fig. 12 depicts an early stage of the disease. Clinically there was no recession of the gums beyond a partial disappearance of the interdental papillæ between the lower incisors. There was a marked marginal gingivitis, together with a congestion of the whole of the gums. There was a free discharge from the pockets around the teeth. This patient had a well-developed arch and there was marked attrition.

The radiographs (Fig. 13) show that the alveolar process is

FIG. 10.

FIG. 11.

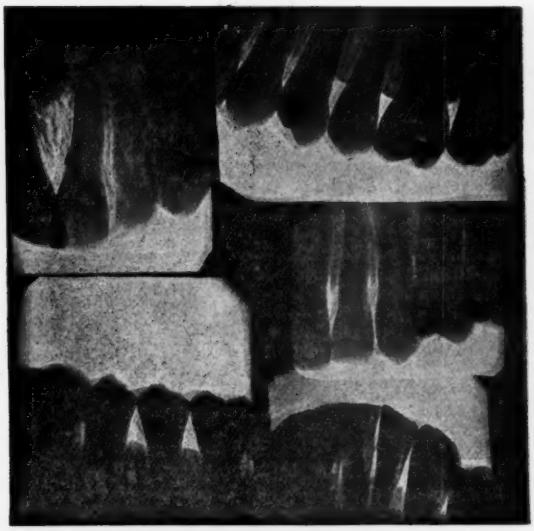


FIG. 12.

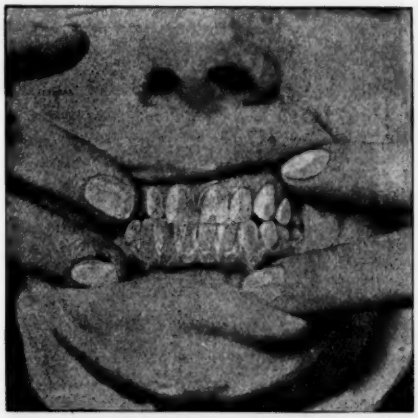


FIG. 13.

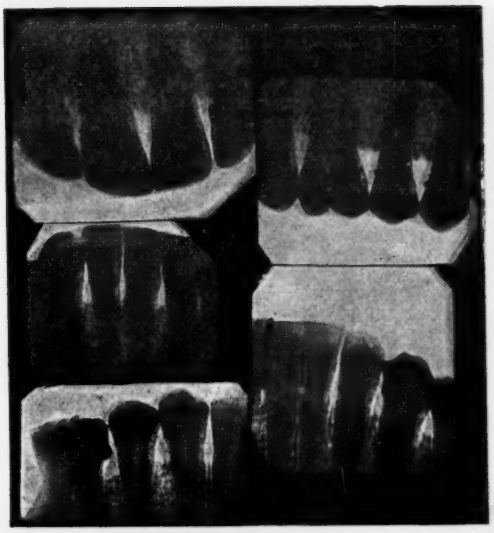


FIG. 14.

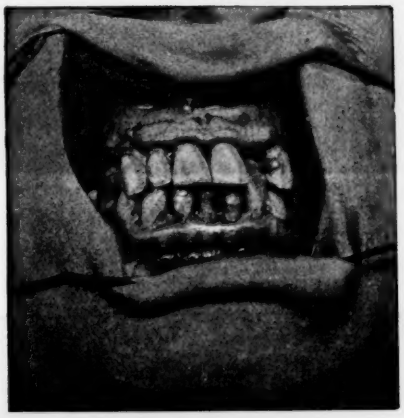


FIG. 15.

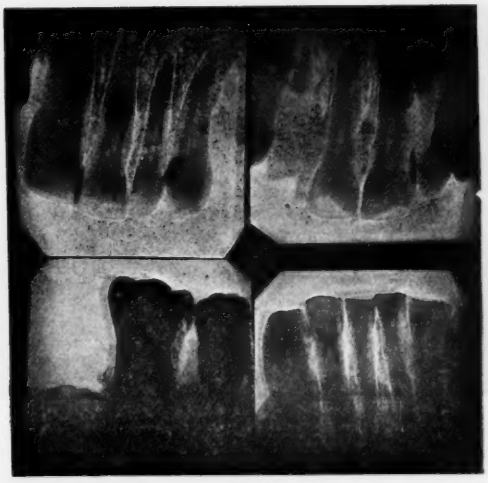


FIG. 16.

FIG. 17.

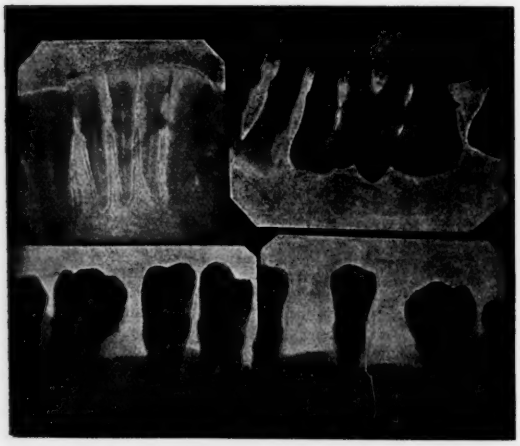


FIG. 18.

FIG. 19

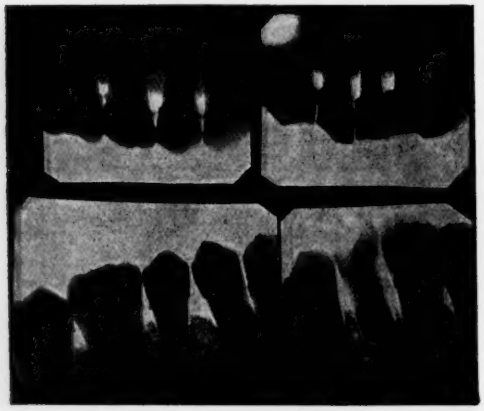
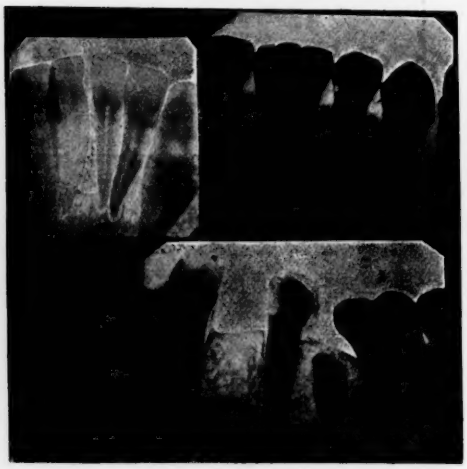


FIG. 20.

FIG. 21.

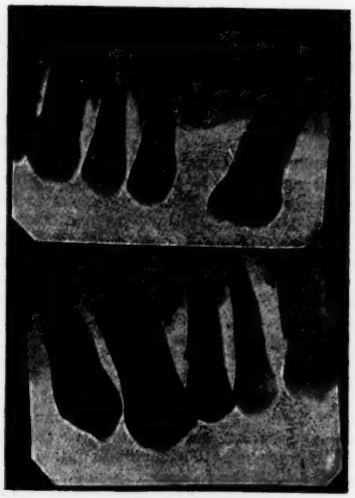
FIG. 22.



already involved and that the destruction of bone has advanced to a considerable extent in the lower incisor region.

In the next patient (Fig. 14) the clinical appearances suggest a more advanced condition of the disease than in the preceding case. The muco-periosteum was more swollen and congested. The interdental papillæ had quite disappeared but the gum margin on the labial aspects of the teeth just failed to cover the necks of the teeth. The radiographs (Fig. 15) show that the bone destruction is much more advanced than the gum recession.

FIG. 23.



The case shown in Fig. 16 illustrates an advanced case. The radiographs (Fig. 17) show the extensive destruction of the tooth sockets, also that the calculus only extends to just under cover of the gum margin.

The case shown in Fig. 18 illustrates some features which are of interest from the point of view of prognosis. The patient, a man aged 34 years, was a compositor by trade, and attended the out-patient department for dyspepsia. Beyond a well-defined marginal gingivitis the gums were normal in colour and firm in consistency. The teeth

FIG. 24.

were smothered with calculus, the gum margin was above the necks of the teeth, and the interdental papillæ had disappeared. Examination with a probe showed slight pockets around the teeth. The clinical features suggested that the disease was of slow progression and that there was comparatively little bone destruction. The radiographs (Fig. 19) show that the destruction is equal in all parts of the mouth, and that the inflammatory process extends only slightly beyond the margin of the bone.

In the case shown in Fig. 20 the patient was a mouth breather and complained of bleeding from the region of the mandibular incisors. The teeth had been regularly cleaned. The gums were well up to the level of the necks of the teeth and the interdental papillæ were not destroyed. There was no gingivitis except around the mandibular incisors, where pus was present. An examination with a probe showed that there was extensive destruction of the alveolar process in the region of the mandibular incisors, while in the rest of the mouth the bone was unaffected. The radiographs shown in Figs. 21 and 22 demonstrate clearly that the only region showing bone destruction is that of the mandibular incisors (radiograph Fig. 22, A).

The radiographs shown in Fig. 23 show an advanced stage of bone destruction and also serve to demonstrate the liability of the antra to become infected in these cases. Note the relation of the antra to the molar teeth.

The radiograph shown in Fig. 24 is from the incisor region. Suppuration was present in the bone over the central and lateral incisors, but the pulps of these teeth were alive, although they showed signs of commencing pulpitis. The path of infection from the gingival margin by the side of the lateral incisor is clearly shown in the radiograph.

THE BACILLUS INFLUENZÆ AND SYMBIOSIS.

BY R. W. ALLEN, M.D., B.S. LOND.,

LATE CLINICAL PATHOLOGIST, MOUNT VERNON HOSPITAL FOR CONSUMPTION; LATE PATHOLOGIST TO THE ROYAL EYE HOSPITAL AND LATE GULL RESEARCH STUDENT IN PATHOLOGY, GUY'S HOSPITAL.

DURING the past year it has been my good fortune to extend considerably my acquaintance with the bacillus influenzæ. As I have already pointed out in THE LANCET,[1] the great majority of cases of so-called "influenza" are not really such, but are instances of infection by the pneumococcus. In a small percentage the bacillus influenzæ and pneumococcus are joint invaders, and in about an equal number of cases the bacillus influenzæ alone appears to be responsible for the symptoms. At that time I had never met with an instance of true chronic influenza, but since then I have encountered 11. Two of the sufferers came from Ireland, 3 from Manchester, 1 from Scotland, and 5 from London, and upon these I have been able to make the following interesting observations.

In the first place, so long as the infection remains in a truly chronic condition no dissemination by means of contact appears to occur, but so soon as climatic conditions determine the lighting-up of an acute attack the carrier becomes a source of infection to all around him. Some of these cases date back the inception of their chronic catarrh 10 to 15 years, and I have little doubt that the recurrence from time to time of influenza among the community is due entirely to a lighting-up of acute attacks in these chronic carriers. Secondly, in about 50 per cent. of these cases I used to find it impossible to cultivate the bacillus influenzæ from the secretion, although present therein in enormous numbers; the purer the infection the more difficult was it to obtain a living culture upon the surface of a blood agar plate. If, however, but four or five colonies of pneumococcus or staphylococcus albus developed upon incubating the plate culture, it was noticed that around these the bacillus influenzæ grew with the utmost freedom; attempts at subculturing the latter were as a rule futile. It thus appeared that in many instances symbiosis with the pneumococcus or staphylococcus albus was essential to the multiplication of the bacillus influenzæ. It occurred to me to endeavour to learn the nature of this symbiosis, and to ascertain whether it was the converse of what occurs when one endeavours to cultivate the bacillus of Friedländer and staphylococcus albus side by side.[2]

Accordingly, from a case of chronic influenza where the staphylococcus albus and bacillus influenzæ occurred together a series of stroke cultures were made from the secretion upon a blood agar plate and the staphylococcus isolated; 20 or 30 of this micro-organism were then introduced into 15 cubic centimetres of melted blood agar at 45° C., and a plate prepared; upon the solidified surface of this a series of stroke cultures were made from the secretion

[1] THE LANCET, Feb. 13th, 1909, p. 510.
[2] Vide THE LANCET, Nov. 28th and Dec. 5th, 1908.

as before. After 24 hours' incubation it was observed that wherever there was a deep colony of staphylococcus, upon the surface of the agar above it the bacillus influenzæ was flourishing greatly, and there alone. Now, this was obviously not true symbiosis, for there was a layer of blood agar perhaps an eighth of an inch thick between the deep colony and the superficial growth, and the deduction was made that the staphylococci so modified the medium in their growth by the formation of soluble toxin or otherwise as to favour the development of the bacillus influenzæ. The following experiment shed further light upon the nature of the process. Some staphylococci were incubated in broth for 24 hours and then killed by heating to 63° C. for 45 minutes; 2 cubic centimetres of this sterilised culture were then introduced into 10 cubic centimetres of blood agar and a plate prepared. Some bacilli influenzæ which refused to grow upon blood agar without the addition of this broth culture were used to inseminate the surface of the plate. After only eight hours' incubation there appeared the most vigorous growth of the influenza bacillus which I had ever seen. It would thus appear that the staphylococcus albus does form a soluble toxin, and that this toxin is highly adjuvant to the multiplication of the influenza bacillus. Identical experiments were made with the following: pneumococcus, staphylococcus aureus, bacillus coli, bacillus acidi lactici (Hüppe), and micrococcus paratetragenus, and a similar effect was observed in varying degrees.

These observations seem to me to shed considerable light upon the nature of symbiosis and to raise several questions of very great practical importance. For instance: 1. Does the same thing hold for growth in the human subject? Is it necessary for the way to infection by the bacillus influenzæ to be paved by weakening of the tissues by the toxins of other microbic invaders? 2. Does the same hold good in other pathological conditions—for instance, in pyorrhœa alveolaris and in pulmonary tuberculosis? This question I am now engaged in investigating. 3. If so, does this shed any light upon the methods of treatment that should be adopted? Immunity against the influenza bacillus is very difficult to establish, and I have conclusively proved to myself that doses of 500 and even 1000 millions of a vaccine are necessary before a chronic influenza infection begins to benefit. In such cases would the better procedure be to attack the symbiotic bacteria and exterminate them? I am satisfied in my own mind that the good results reported as achieved in some cases of pyorrhœa alveolaris have been brought about in this way, and I cannot help feeling that a thorough investigation of the relationship one to another of the tubercle bacillus and the secondarily infecting organisms in pulmonary tuberculosis will point the way to more satisfactory methods of treatment.

Harley-street, W.

THE NATIONAL ASSOCIATION FOR THE ESTABLISHMENT AND MAINTENANCE OF SANATORIA FOR WORKERS SUFFERING FROM TUBERCULOSIS.—The annual report of this association, which was presented at the annual meeting held at the offices in Gray's Inn-road, London, W.C., on April 20th, shows a record of progress which speaks well for the business capacity and attention to details of the management committee of the Benenden Sanatorium. During the year 1909 an addition has been made to the administration block for the accommodation of the staff, and the work in connexion with the erection of the Countess Cadogan Pavilion has been greatly accelerated. It is hoped that it will be ready for use in the early part of next year. 63 beds are maintained in the sanatorium by various societies, 35 being devoted to the Post Office Association. The Hospital Saturday Fund maintains 15, and the Hearts of Oak Benefit Society 5. The medical report states that during 1909 229 patients left the sanatorium, and of these 3 were probably non-tuberculous. Of the remainder 94 were discharged with the disease arrested, 99 were improved, 32 were unimproved, and 1 died. An attempt is made to keep in touch with as many patients as possible after leaving the sanatorium, and of 98 patients who left more than six months ago and less than 12 months ago 83 have been traced. Of these 38 are in full work, 4 in partial work, 21 doing no work, 13 have died, and 7 have been readmitted. It should be mentioned that some of those who are doing no work are in good health, but are out of employment for other reasons.

REMOVAL THROUGH THE MOUTH OF A SHAWL-PIN IMPACTED IN A SECONDARY BRONCHUS.

BY STCLAIR THOMSON, M.D., F.R.C.P. LOND., F.R.C.S. ENG.,

PHYSICIAN FOR DISEASES OF THE THROAT, KING'S COLLEGE HOSPITAL.

With Remarks by F. DE HAVILLAND HALL, M.D. Lond., F.R.C.P. Lond.

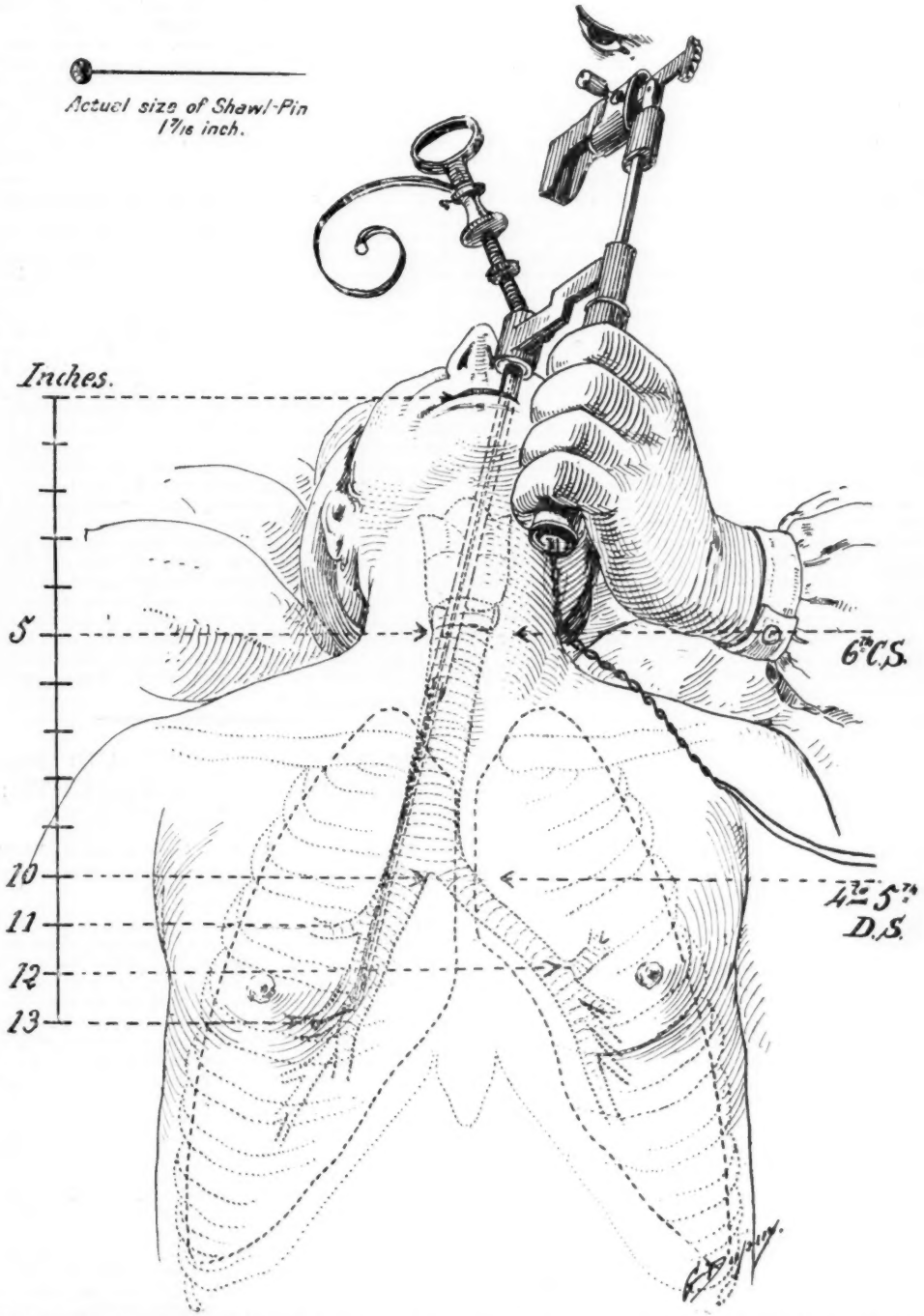
ONE hundred and five deaths from foreign bodies in the air and food passages, or from ill-advised efforts at removal, were recorded in North America in five years. In a large percentage of cases blind groping after foreign bodies aggravates the mischief and fails to remove the intruder. Chevalier Jackson points out that the above figures show the necessity of acquainting the general profession with the advances already made, and still being made, in œsophagoscopy and bronchoscopy.[1]

Although laryngologists in this country are now generally acquainted with Killian's method of direct endoscopy, yet the records of successful cases are not so numerous as in foreign literature, and the following story illustrates the rapid, certain, and safe relief of a condition which a few years ago would have seemed hopeless, "considering the serious and almost invariably fatal consequences of a foreign body firmly impacted in a bronchus."[2]

On a Friday afternoon a young married lady was holding a shawl-pin between her teeth, when she laughed, and the pin vanished down her throat. So free was she from any spasm, cough, or discomfort in breathing that it was thought at first that the pin must have gone down the œsophagus. A careful search in this area by Dr. Arthur G. J. Thompson of Twickenham failed to detect it. The patient said that she felt no discomfort, but that with respiration she felt a flapping in her windpipe. Later in the evening she had a sensation as if the pin had moved over to the right side. On the next morning (Saturday) she felt that her movements in dressing caused the pin to move still further down into the right lung, and from that moment she ceased to have any pain. She was only conscious of a feeling of dull oppression and some discomfort in moving the right arm. On the same morning, after examination by the X rays, Dr. Thompson telephoned for Mr. Albert Carless, who kindly referred the case to me. The patient came to London in a motor-car that afternoon, and an X ray examination by Mr. A. D. Reid distinctly showed the pin lying about one and a half inches below and slightly internal to the right nipple, with the head downwards and moving freely upwards and outwards with each respiration. The same evening I had the advantage of a consultation with Dr. de Havilland Hall, and at 8 P.M. the patient was put under chloroform. No cocaine was used until the patient was anæsthetised, then I applied a 20 per cent. solution of cocaine successively to the pharynx, epiglottis, larynx, trachea, and the bifurcation of the trachea. This was carried out under the bronchoscope, and it was interesting to note how extremely sensitive was the bifurcation of the trachea, although the patient was thoroughly relaxed. When all these reflexes had been abolished Brünings' telescopic tube was introduced and the right bronchus was searched. No trace of the pin could be found. Surprised at this, and thinking that the examination tube had overshot the foreign body, I retreated to the bifurcation of the trachea and once more carefully examined along the right bronchus, which is 3 inches long on the right side. Finding no trace of the pin, I turned to the orifices of the secondary bronchi. Contrary to what one had been taught of the anatomy of this region, the bronchus did not divide dichotomously into two fairly sized tubes, but appeared to break up at once into three small secondary bronchi. These were all seen to be quite empty. I thought that possibly during the four hours which had elapsed since the radioscopic examination in the afternoon the pin might have been coughed up and swallowed, or (as has happened) might have passed across to the left bronchus. I was about to suggest a further examination under the X rays when I thought

[1] American Medical Association, Transactions of the Section of Laryngology, June, 1909, p. 279.

[2] Samuel West: Diseases of the Organs of Respiration, vol. i., 1909, p. 30.



Direct bronchoscopy. Removal of a shawl-pin impacted in a secondary bronchus (dorsal) of the right middle lobe. On the right-hand side of this semi-diagrammatic drawing there is indicated the correspondence of the cricoid cartilage to the sixth cervical spine, and of the bifurcation of the trachea to the interval between the fourth and fifth dorsal spinous processes. On the left-hand side of the drawing the distance is given, in inches, from the upper molar teeth to the cricoid cartilage, the bifurcation of the trachea, the branch of the right bronchus to the upper lobe (eparterial branch), the first branch of the left bronchus, and the branch of the right bronchus to the middle lobe. It will be noticed that the length of the trachea is five inches, and that the cricoid cartilage is the same distance from the upper molar teeth. It is also seen that the first branch of the right bronchus is given off at a distance of one inch from the bifurcation of the trachea, while the left bronchus is two inches long before any division takes place.

of tilting the orifice of the bronchoscope well backwards so as to search any dorsal branch of the main bronchus. Here at once I saw projecting the sharp, black point of a pin making slight excursions with respiration, and with the mucous membrane injected and swollen so as to surround it closely and conceal all view of the stem and head. I seized the sharp point firmly with a pair of forceps, which I then withdrew through the bronchoscope. On bringing the forceps out through the mouth they no longer held any pin. On looking down again into the lung, I saw that the head of the pin had become hitched against the extremity of the bronchoscope, and so dragged from my forceps. Therefore, having again seized hold of the point of the pin, I withdrew the bronchoscope, forceps and pin altogether.

The time occupied was exactly 20 minutes, and this comprised the induction of the anæsthesia and the progressive application of cocaine. I am convinced that the gradual and careful abolition of local sensation was of great importance in this case. There was no frothing of mucus or disturbance in respiration. For the striking success of the procedure I am extremely indebted to the skilful administration of chloroform by Mr. Bellamy Gardner, and the able assistance of Dr. Thompson and Dr. Irwin Moore.

The subsequent history is unimportant. Dr. de Havilland Hall examined the patient next day and found no evidence of any disturbance. There was no cough; breathing and voice were not interfered with; and there were no indications of any traumatism. Fortunately, there was no tracheotomy wound to close and leave a scar. The patient returned home two days later and has remained perfectly well.

The accompanying illustration gives the actual size of the pin removed, and the semi diagrammatic drawing indicates the situation where it was impacted and the method of reaching it. The distance from the teeth to the impacted pin, as measured by the length of the tube, was 35 centimetres (13¾ inches). The pin had evidently entered a dorsal branch of the division of the bronchus going to the middle lobe. It is hardly necessary to point out that, being head downwards, with the swollen mucosa already closing round the stem, and with the sharp point projecting obliquely into the main bronchus, there was hardly any prospect that the pin would ever have been expelled through the mouth. The hopelessness of reaching a foreign body impacted in the lung has been demonstrated only too frequently. The after-history of a foreign body in the bronchi may be full of surprises. In a few cases it may remain more or less latent for months or even years, and may, in a few fortunate instances, be coughed up. The usual sequel in the vast majority of cases is pulmonary complications and death.

Relief cannot be given too promptly. The pin in the above case had only been in the lung 27 hours, yet it was already rusted in parts. All of it, except the pointed extremity, was concealed and embedded in the swollen mucous membrane. It could not have been long before this point would have been submerged in muco-pus. It has been pointed out by von Eicken that acute pneumonia may be started by a foreign body in the lung within 48 hours. It is well, therefore, to realise that every patient with a foreign body in the upper air and food passages is in danger until the intruder is expelled; that the danger varies with the nature and situation of a foreign body, and is increased when it becomes impacted; and, finally, that even when such a dangerous substance as a shawl-pin is tightly fixed in a secondary bronchus, yet it can be safely and rapidly removed by a method which is bloodless and practically free from all risks. It cannot be hoped that the skill for these delicate manipulations can be acquired by everyone, but there are few laryngologists who cannot carry them out, and the number of these experts is probably as great as that of surgeons who would venture nowadays on the obsolete methods at removal which are rendered unjustifiable since the introduction of Killian's tubes.

The moral for those who are neither laryngologists nor operating surgeons is that for an accident which was only too frequently and inevitably fatal we now have an operation which is almost always safe and successful. A second lesson is that these cases should not be kept from the expert until after the failure of old-fashioned methods. In the above case I had the great advantage of operating in conditions undisturbed by previous interference. Dr. Thompson and Mr. Carless were, fortunately, both decided to "defer no time, delays have dangerous ends."

Remarks by Dr. DE HAVILLAND HALL.—Before commenting upon the purely medical aspect of the case I would like to point out how the wonderful scientific advances made in the lifetime of many of those still actively engaged in practice conduced to its successful issue. In the first place, (1) the *telephone* was called into requisition to make an appointment for the patient to be examined by the (2) *X rays*. She was conveyed from her home to London in a (3) *motor car*. At the operation general anæsthesia was produced by (4) *chloroform*, and complete local anæsthesia by (5) *cocaine*. Finally, the pin was removed through (6) *Brünings' telescopic tube*. (1), (2), and (3) greatly facilitated the operation, which, however, was only rendered possible by the employment of (4), (5), and (6).

On being called into consultation by Dr. StClair Thomson I pointed out to the patient's friends the grave results which usually attended the presence of a foreign body in the air passages, and they at once gave permission for the performance of any operative procedure which should be deemed necessary. This unrestricted permission seemed to me essential, as, from the position of the pin in the chest, and from my very limited experience of Brünings' tube, I hardly expected that the foreign body would be removed *per vias naturales*. Dr. StClair Thomson has described the various steps of the operation, so that it will be unnecessary for me to say anything about it, except that what impressed me most during its performance was the great importance of a skilled anæsthetist and the absolute necessity for the free use of cocaine to procure complete local anæsthesia. Dr. StClair Thomson demonstrated to me the presence of the pin in the bronchus by means of Brünings' tube, but even after I had seen the pin *in situ* I was hardly prepared for the speedy manner in which Dr. StClair Thomson seized and extracted it. Owing to the delicate manipulations required on the part of the operator, and the collaboration of a skilled assistant in addition to the anæsthetist, this operation must necessarily be left in the hands of those who have the opportunity of frequently using the instruments employed in the operation.

Queen Anne-street, W.

CEREBELLAR ABSCESS AND ACUTE SUPPURATIVE LABYRINTHITIS: DIFFERENTIAL DIAGNOSIS.

BY JAMES HARPER, M.A., M.B., CH.B. GLASG.,
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As a complication to aural suppuration, cerebellar abscess is one of the most dreaded conditions with which the aural surgeon has to deal. When one considers the thin barrier of bone which separates the suppuration in an ear from the brain, one cannot help being struck by the relatively small number of cases in which intracranial complications occur. Cases of aural suppuration will go on for years, and, indeed, in some cases for a lifetime, without causing any inconvenience to the patient other than that of a discharging ear. There are other cases in which the patient is continually having symptoms which rouse some anxiety in the surgeon's mind as to there being something more in the case than merely a middle-ear condition. Patients often complain of giddiness and disturbance of equilibrium at various times (during which the ear discharges), but, while these symptoms go and come and are apparently of a passing nature, there are yet many cases in which giddiness and a general feeling of malaise are continually present. In these cases we may have a sudden exacerbation of symptoms and the patient may appear to be acutely ill. Knowing the grave possible complications the surgeon instinctively thinks of some intracranial mischief. The change mentioned above is, as a rule, sudden, and when, in addition to giddiness and disturbance of equilibrium, we have nystagmus added, it then becomes a difficult problem to decide whether this is merely an involvement of the labyrinth, which in itself is a serious enough condition, or whether the suppuration has spread to the cerebellum, thereby setting up cerebellar abscess. Or, again, the surgeon, from the gradual increase in the severity of the symptoms, may have made up his mind already that the labyrinth is involved to a greater or less extent, and he may now have to settle the question whether he has, in addition,

cerebellar abscess. In either of these conditions the patient is acutely ill. Active interference is urgently called for, and the delay of several days in which the symptoms of cerebellar abscess may become more pronounced and allow the surgeon to make a definite diagnosis has often cost the patient his life.

In this short paper a method will be described which is both simple and easy of application, and by which the surgeon will be able to differentiate these two conditions and thus save valuable time.

This method depends for its value on the result of special tests on the labyrinth. By producing mechanical irritation on the sensitive canals definite phenomena are brought about. From a knowledge of those results in health and a comparison with what is found when the labyrinth is diseased, we have been able to make certain definite rules, so that, on the application of these tests, if we find that our results correspond to what we know to be the normal, we can be quite sure that the labyrinth is in a sound condition.

On the other hand, should our results differ from what we call the normal, we are able to form a definite opinion, not only as to the diseased condition of the labyrinth, but also in a large number of cases as to the extent of the disease.

We are greatly indebted to the studies of Flourens in the early parts of the nineteenth century, and to the later experiments of Ewald, for our knowledge of the phenomena resulting from vestibular irritation. Bárány[1] has been able to explain these results by modern methods and to give to them their proper clinical significance. There are three chief methods by which vestibular irritation may be brought about. Two of these attain their object by causing a flow of the endolymph in the semicircular canals. Normally these canals are continually sending impulses to their centre, the geniculate ganglion in the internal meatus, and from there fibres pass to Deiters's nucleus in the medulla, which is connected with the nucleus of the sixth nerve of the opposite side. This nerve controls the external rectus of its own side and the internal rectus of the opposite side in conjugate movements of the eyeball. Now, if this balance between the two sides be upset, the result will be—either one side will have a more powerful action or the other will have a diminished function; in either case we get nystagmus.

Vestibular nystagmus has certain definite characteristics. It consists of two components, (1) a slow movement, and (2) a quick jerky movement. These movements are increased if the eyes be turned in the direction of the quick movement and are stopped if the eyes be turned in the opposite direction. Accompanying this nystagmus, objects seem to fall in the direction of the quick movement. This is produced by the slow movement of the eyes, since there is not sufficient time in the quick movement to produce any impression. Nystagmus is also seen in disseminated sclerosis, Friedrich's hereditary ataxia, &c., but in these conditions it is more of a regular, from side to side, oscillation, both components being equal as to time and strength.

There are three chief tests on the labyrinth by which nystagmus is brought about—the caloric, the rotatory, and the galvanic. Of the three, the caloric is the best for our purpose. It is easy of application, only a simple apparatus is required, and the patient need not be disturbed in applying it. In the rotatory test, on the other hand, the patient must be able to sit up, a more elaborate apparatus is required, while even in the hands of skilled investigators results are not always reliable. The third test, the galvanic, though useful, perhaps, in certain cases as confirmatory evidence, is not found to be of much practical value, because as a rule the pain and the discomfort caused by its application make it such that few patients will submit to it. The rotatory test and the galvanic will be described in brief, but the caloric will be described in detail, since it is upon this test that the value of our method depends.

The rotatory test.—The patient is made to sit upright in a revolving chair. This chair is turned round 10 times in 20 seconds. At the end of the turning the patient will be found to have a nystagmus in the opposite direction to that of the turning. Objects will appear to fall to the side of the nystagmus. If the patient be made to stand upright with the heels close together he will fall in the direction of the nystagmus, but will feel as if he were falling in the opposite direction. The direction of the resultant nystagmus depends upon the semicircular canal in which the endolymph is displaced, and Bárány has enunciated the law that the plane of resultant nystagmus will be found to be that meridian of the cornea which corresponds to the plane of rotation. The duration of this nystagmus varies greatly. In one case it will be found to be 5 seconds, and in another as much as 2 minutes. Also both sides will often be found to be unequal as to the time.

The galvanic test.—One electrode is placed on the mastoid and the other is held in the hand of the same side. If the kathodic pole be placed on the mastoid, say, of the right ear, we get a nystagmus to the right, while if the anodic pole be placed on the left mastoid and the other electrode in the hand of the same side we also get a nystagmus to the right. The explanation is as follows: the kathodic current produces a condition of kathelectrotonus, which is equal to an increased excitability. Not only is the labyrinth excited, but also the vestibular nerve in the internal meatus which leads to Deiters's nucleus, and so impulses pass easier to that side. The anodic current, on the other hand, produces a decrease in the irritability of that side and thus the normal stimulus from the right overcomes the weaker on the left side, so that we get a nystagmus to the right. It will also be found that if both electrodes be placed in the middle line, say one on the forehead and the other on the chest, no nystagmus is produced. As an explanation to the direction of the nystagmus, whether to the right or left, it may be here noted that it is the tendency of every normal labyrinth to cause nystagmus to its own side.

The caloric test.—We are greatly indebted for our knowledge of the technique and our understanding of the significance of the caloric test to Dr. Bárány of Vienna. The method taught in his clinic is easy of application and only a simple apparatus is required. If we irrigate the ear of a person with water at the temperature of the body no result will follow; but if the temperature of the water be raised above that of the body, or if it be lowered, nystagmus will result. In the former case nystagmus will be towards the side irrigated. In the latter case it will be towards the opposite side. To carry this out all that is required is a cistern to hold the water, attached to which is a rubber tube with a glass nozzle at the end to fit into the external meatus. When the water is first allowed to flow there is in normal individuals no nystagmus for about 12 seconds and then the movements gradually increase. Should the irrigation be continued too long the patient will complain of giddiness, and in some cases there will be a feeling of sickness.

Bárány's theory as to the cause of this caloric reaction is as follows. He regards the whole labyrinthine cavity as a vessel containing fluid at the temperature of the body. If cold or hot water is brought into contact with this vessel the specific gravity of that part of the fluid nearest the affected wall will be increased or reduced, and thus a flow will be caused in the fluid. Now, the parts of the semicircular canals nearest the inner wall of the middle ear, which are thus the first parts to be acted on by this change of temperature, are the anterior parts of the horizontal canal and the external third of the anterior vertical canal. No flow can result in the horizontal canal owing to its horizontal position, but in the case of the vertical canal there will be a flow and thus nystagmus will result, this nystagmus being of a rotatory type. This explanation is in full accordance with the experimental results obtained by Ewald.

As to what temperature of water is most useful, it will be found that the best results are obtained when the water is at 21° C. or 39° C., according as the nystagmus is desired to be away from or towards the affected ear.

The value of these experiments depends upon the fact that should the canals be destroyed either by a surgical operation or by disease there will be no resultant nystagmus from these tests, and thus the caloric one is of great value in giving us a true indication as to the condition of the labyrinth. As regards unilateral destruction of one labyrinth, this may be caused by suppurative trauma, fracture of the base, syphilis, cholesteatoma, suppuration, &c., but it is to those conditions due to suppuration I wish to devote my attention.

In this short paper I do not intend to enter into a discussion as to the relative merits of the theories of Bárány and Vonstein as to the condition of the labyrinth in chronic suppurative labyrinthitis, but would rather devote attention to those cases in which the question lies between acute

[1] Von Bárány: Physiologie und Pathologie des Bogengang-Apparates eim Menschen.

suppurative labyrinthitis on the one hand and cerebellar abscess on the other.

The symptoms of these two conditions have much in common. As a rule, in both the patient is acutely ill, and, again, in both, for a day or two, the patient may be able to go about, though obviously there is something abnormal in his condition. In both there are disturbance of equilibrium, giddiness, and nystagmus. In both the general condition of the patient as regards pulse, temperature, &c., may be very much alike and the surgeon is forced to delay before coming to a definite diagnosis. Of course, he may make an exploratory operation with a view to finding out the real condition of affairs and dealing with it accordingly, but this is often rather unsatisfactory, since apart from aural suppuration the surgeon may have diagnosed cerebellar abscess, and yet on opening into the cerebellum be unable to find any trace of pus. By a proper use of the caloric test the surgeon should find it a comparatively easy matter to distinguish symptoms due to labyrinthine irritation and that due to cerebellar abscess.

Spontaneous nystagmus due to labyrinthine suppuration has the following characteristics. Up to the third or fourth day the nystagmus may be increased by movement, but after that it gradually decreases until about the fourteenth day it has disappeared. This disappearance of the nystagmus is held to be due to the action of the sound labyrinth; and Bárány explains it thus. He considers the impulses to be made up of three component parts, and since it is the inclination of the normal labyrinth to cause nystagmus to its own side, only one causes nystagmus to the other side. Now, each labyrinth normally balances the other. If one labyrinth be destroyed, the sound labyrinth will overcome that component in the same labyrinth which causes nystagmus to the opposite side. But after a lapse of some time these two components gradually decrease in power until about the end of a fortnight, when they are merely equal to one component, and thus we have no nystagmus.

Now suppose our patient, who has had a discharging ear for some time, is suddenly afflicted with giddiness, disturbance of equilibrium, and spontaneous nystagmus. Obviously he is acutely ill; in all probability he will have taken to bed, and we now wish to decide whether this nystagmus is due to cerebellar abscess or to some labyrinthine affection. The rotatory test is out of the question as it involves so much disturbance of the patient, but the caloric will be of great value to us in coming to a definite decision.

Let us imagine a strong rotatory nystagmus to the right and that it is the right ear that is diseased. With the patient lying on his back sterilised water at 21° C. is allowed to flow in through the external meatus. If after a lapse of from 12 to 60 seconds we do not get a nystagmus to the left, and the nystagmus to the right is not lessened, this nystagmus to the right must be due to some intracranial condition. The absence of the right caloric reaction shows that the right canals must be already destroyed, or at least that their function is lost and that they are no longer capable of sending impulses, and, again, if all this spontaneous nystagmus were due to the destruction of the right canals, it would be to the left and not to the right, and thus we can settle the point that the nystagmus is not due to any labyrinthine condition.

But should the patient have rotatory nystagmus to the left and not to the right, we can again apply the caloric test, but in this case the water must be at a temperature of 39° C, since we wish if possible to create a nystagmus to the right. If we find the function of the labyrinth remains, even though it is impaired to some extent, we must diagnose suppuration of the labyrinth and not cerebellar abscess, but should this spontaneous nystagmus not become less after four or five days we must diagnose cerebellar abscess in addition. Indeed, we may say as a general rule that should the patient have a strong rotatory nystagmus to the right or to the left, and if on application of the caloric test the right canals are found to be capable of being irritated, and if this nystagmus does not get less as time goes on, then it is evident that the cause must be intracranial.

Cavendish-place, W.

DEATH OF A CENTENARIAN.—The death occurred at Langton, near Tunbridge Wells, on April 27th of Mrs. Skinner, who was 106 years of age. She was not long confined to her bed and retained her faculties up to the last. Married at the age of 28 she had eight children.

THE USE OF SOLID CARBON DIOXIDE.[1]

BY EDWARD REGINALD MORTON, M.D. TORONTO, F.R.C.S. EDIN.,

VICE-PRESIDENT, ELECTRO-THERAPEUTICAL SECTION, ROYAL SOCIETY OF MEDICINE; LECTURER ON RADIOLOGY, WEST-LONDON POST-GRADUATE COLLEGE; IN CHARGE OF THE X RAY DEPARTMENT, WEST LONDON HOSPITAL.

ALTHOUGH carbon dioxide was first introduced into therapeutics in a practical way by Pusey of Chicago, I was not aware of this at the time it was brought to my notice by Dr. Geyser of New York in June, 1909. I do not remember being so much attracted to a new therapeutic agent as I was to this, nor do I remember one where extensive application of it has brought out so little that is disappointing and so much that is satisfactory.

In solid carbon dioxide I consider we have the most important therapeutic discovery of recent times, not excluding that remarkable substance radium. This is not to be taken as in any way detracting from radium, few realise more than I do the enormous possibilities it has, but until it becomes cheaper and more plentiful it can never take the place it deserves in the treatment of disease. Carbon dioxide, on the other hand, is both plentiful and cheap, the time of the application is a matter of seconds, the latent period before reaction sets in is one of minutes, the reaction itself is a question of hours, and the whole process is completed in a small number of days. In addition to all this, the application is almost painless, as is also the subsequent reaction, so that even with children no anæsthetic, local or general, is ever necessary; and finally, it is extremely efficient, so much so that in suitable cases it seldom fails. Failure is more often due to faulty technique than to faults inherent to the substance itself. Is there any other agent for which so much can be said?

It is of interest and of value to speculate as to what it is that brings about the beneficent reaction that follows an application.

The temperature of solid carbon dioxide is - 79° C., and as the gas under ordinary conditions of temperature and pressure has no local action the effects produced when applied in the form we are now considering must be due to this extremely low temperature, and to this alone. And yet if we compare the results attained by this agent with the effects produced in cases of ordinary frost-bite we are not helped to any great extent. In the latter condition the tissues are as a rule not chilled to more than a few degrees below 0° C., but this mild degree of freezing lasts in most cases that come under our professional care perhaps an hour or may be several hours. On account of the length of time the tissues are frozen we may, and often do, get the most serious results to limb and even to life.

Ordinary freezing lasting only the few seconds necessary to get a very lively reaction from carbon dioxide gives rise to the most trifling effects, so we are forced to the conclusion that the intensity of the reaction following an application of solid carbon dioxide must be the result of the very low temperature to which the tissues are subjected.

I think, however, that a little consideration will show that this very low temperature is quite capable of bringing about all the changes that follow an ordinary application of solid carbon dioxide. As the tissues are cooled through giving up their heat to the crayon, the first effect after freezing point is reached is, of course, that they become rigid. The individual cells, instead of being so many membranous sacs with a fluid or semifluid content, are hard and firm like a dried bean or a pebble. It is conceivable that if the agent were removed at this stage the results would be very slight. In an ordinary application, however, the chilling process goes on to such an extent that those parts next the crayon are cooled to the temperature of the latter, and those lying further away to a lesser degree depending on the distance. Now, as is well known, water and substances containing it to a large extent undergo expansion progressively as the temperature falls below 4° C. If this expansion follows on rigidity the cell structure must suffer mechanical injury. The cell-wall will be fractured, also that of the nucleus; the secondary structure is likewise damaged, and while these injuries will be of perhaps ultra-microscopic dimensions, they

[1] A paper read at the Third International Congress of Physio-therapy held at Paris, 1910.

will be none the less potent to bring about the immediate and intense reaction that follows.

The demonstration of these changes will not be an easy task, but it should be within the capabilities of those accustomed to modern laboratory methods, and in view of the great importance of refrigeration as a local therapeutic agent I commend this research to those who have the time and inclination for work of this kind.

Methods of preparation.—In my original paper[2] and demonstration I advocated the preparation of a crayon direct from the cylinder of the compressed and liquefied gas, and where one has a large number of cases to attend to I still think it is the easiest and most convenient method to employ. I usually make a crayon about 2½ centimetres in diameter and about 12 centimetres long. If this has been properly prepared it will be quite firm and hard, and will last for from one to two hours if left exposed in an ordinary room. With such a crayon I have treated 30 cases in an hour and a half. It must be admitted, however, that the preparation requires a certain amount of skill and practice.

Personally I much prefer the large cylinder of commerce to work with. It contains about 25 pounds of the liquid CO_2 at a pressure of from 200 to 300 atmospheres. Also the cylinder, whatever be its size, must be so disposed that the outlet valve is covered on its inner aspect by the liquid; that is, it must be on a lower level than the rest of the cylinder. To use the cylinder with the valve at the highest point, as some have advised, is not only extremely wasteful, but displays a complete ignorance of the physical properties and aspects of the subject.

The necessary apparatus to prepare a crayon as referred to above are few and simple—viz., a cylindrical ruler, a short cork of the same size, a towel, and two ordinary bandages of about 10 centimetres width.

The towel is first folded lengthwise into three or four, according to the length of crayon desired. It is now rolled around the ruler tightly, so as to form, when the latter is withdrawn, a hollow porous cylinder. The cork is placed in one end of this and the other end is applied over the outlet of the cylinder containing the liquefied carbon dioxide. The bandages are now applied around the towel and over the valve end over end, also making a figure-of-eight where the towel and valve come together, so as to make as tight a joint as possible at this point. This is best done with the valve pointing horizontally. When ready the cylinder is turned so that the valve is pointing downwards, and the valve is opened sufficiently to let the hollow within the towel fill up fairly rapidly. This may be continued until the gas blows out through the bandages and the towel feels hard and firm. The bandages are then removed, the towel is unrolled, and the crayon is ready for use.

This is, in my opinion, the most useful method to employ in hospital work where one has a large number of cases to attend to.

Another method where a smaller number of cases have to be done is the same as above except that no bandaging is done. The towel is held in place with one hand, while the valve is manipulated with the other. As soon as the towel becomes filled with the soft carbon dioxide snow, which is known by some snow being blown out into the room, the valve must be closed. The towel being unrolled, we have a crayon of soft snow, too soft for convenient use. It is made ready by filling a short length of solid-drawn metal tubing and compressing it with a suitable rammer, using a mallet if a very hard crayon is required. In this way we can make up as much or as little as we may want at any time, and the metal tubing in which we mould our crayon may be large or small, and of any section, such as round, square, or hexagon; the latter two are for doing large areas, such as port-wine marks, so as not to leave intervening spaces untreated. This is probably the most useful and convenient of all the methods of preparing carbon dioxide for therapeutic use.

I would like to take this opportunity of showing an apparatus designed by my colleague Dr. W. Hampson, and carried out by the firm of "Aerators, Ltd." In this arrangement are used small cylinders of the liquefied gas, the smaller making only enough for a single case, the larger ones containing sufficient for several cases. They are, in fact, glarified "sparklets." The method of employment is, as you see, very simple and also efficient. It will, I am sure, be of great convenience to those living at a distance or who only require it occasionally.

Dosage.—In considering this question we must remember that in this method of refrigeration we are using a solid crayon, the temperature of which remains constant. Though we describe it as solid, it is yet sufficiently soft that it can be cut to any desired shape with an ordinary pocket-knife. By virtue of these properties, as well as those mentioned at the beginning of this paper, it stands alone and superior to all other refrigerating agents used in therapeutics.

The only two variable factors in dosage are time and pressure. Time is easily measured, and the best degree of pressure to employ in any given case is acquired through experience and practice.

Speaking generally, I find that the pressure should be sufficient to arrest the circulation, and if it also renders the part anæmic for the time being so much the better. The more thoroughly this is done the shorter is the length of the application. The time of the application is usually from 30 to 40 seconds. If the part under treatment overlies a bone the length of the application need not be so long. Care must be taken not to freeze too large an area when applying over a soft part such as the thigh. As pressure is made the surrounding tissues rise up, so to speak, and enclose the crayon, becoming involved in the action of the latter. Probably no great harm is done, but it is not desirable that this should occur.

Effects of the application.—On removing the crayon after making an application the depression persists, gradually returning to its normal contour in a time that varies from two to three times that of the application itself. It appears to depend to some extent on the normal activity of the circulation of the part. The depressed and treated area is found to be pure white and hard, just as if a piece of porcelain had been let into the tissues. When it has returned to its normal contour the surface is seen to be covered with moisture which has condensed upon it during the frozen stage.

The reaction commences almost at once, so that in a very few minutes the treated area is of a firmer consistency and beginning to swell. A wheal quickly follows and a vesicle is formed within an hour, where the application of the crayon has lasted 30 seconds or more. The subsequent changes may be briefly described as a simple, aseptic, plastic inflammation, without gross destruction of tissue. Necrosis may occur if the application has been unduly prolonged, but this is unnecessary and in most cases contra-indicated.

It is incorrect to describe solid carbon dioxide as a caustic, in my opinion. Caustics, strictly speaking, destroy tissue by virtue of their inherent chemical properties; carbon dioxide does not do so. Local death may take place at a later period, but this is not the immediate result of the carbon dioxide or even of the freezing. It is caused by the inflammatory stasis which follows a prolonged application, and this in turn is an essential part of the vital reaction that is provoked.

After-treatment.—While this presents no difficulty we must be careful to prevent septic contamination. Should this happen, the healing process is much prolonged, and the resulting scar unsightly. This agent provides us with a method of setting up a reaction that is independent of sepsis, and our aim should be to maintain this state of things.

The vesicle when it forms should be pricked with a sterile needle and the fluid evacuated. It occasionally happens that the vesicle contains a whitish material that is too thick to flow out readily, but even here the opening of the vesicle will relieve tension and make the part more comfortable. The vesicle may have to be relieved a second or even a third time. Within a few days a crust forms and this should be left alone and allowed to separate of its own accord. This takes place in about two weeks, and the surface is seen to be smooth and of a pink colour, which gets paler as time goes on. The final result is a soft, pliable, and elastic scar of the colour of normal skin as nearly as possible, and in an average case almost unnoticeable after about six months.

It is only during the few days that the vesicle is discharging that any dressing has to be applied. In hospital practice a small circle of lint smeared with boric acid ointment meets the conditions very well. Any antiseptic ointment is suitable, and I have found such preparations as euthymol cream, hazeline cream, and others satisfactory and agreeable. They

[2] THE LANCET, Dec. 4th, 1909, p. 1658.

are to be applied as above and may be dispensed with after four or five days in most cases.

I will now pass on to the results I have obtained by this method of treatment. Most of the cases treated by me have been nævi, of which there were 167. As some of the patients had two or more to be treated, the total number of nævoid growths was 208.

Capillary	134	Stellate	5
Cavernous	51	Lymphatic	4
Capillary and cavernous (mixed)	9	Port-wine marks	5

Capillary nævi.—Of these, 121 cases were completely cured by a single application lasting, as a rule, 40 seconds; 8 had two, 2 had three, and 2 had four applications; 1 case completely cured after three applications was finished off by electrolysis.

Cavernous nævi.—As might be expected, the results attained in this class are not so brilliant, but even here 33 cases were completely cured by a single application; 8 had two, 3 had three, and 2 had four applications; 5 cases were incompletely cured or not benefited, and done by electrolysis.

In those cases where the capillary and cavernous varieties were mixed carbon dioxide was used for the most part, but in most of them there was a deeply seated cavernous part that was more suited to electrolysis.

Port-wine marks.—This still remains the most difficult variety of nævus to deal with, and while I cannot claim to have had results vastly better than can be obtained by other methods, such as radium, the results that can be had by the use of solid carbon dioxide are, in my opinion, as good as any other, and the method is free from most of the objections that can be laid to the usual modes of treatment. Every portion of the mark has to be treated at least twice, and mostly three times. A single application appears to have little or no result so far as taking out the colour is concerned.

Lupus vulgaris.—Quite recently I have had seven cases of this disease to treat, and so far as the immediate results are concerned there is every reason to think that in carbon dioxide we have a means of dealing with this scourge in no uncertain way. In treating these I remove crusts as far as possible and make very firm pressure for at least 40 seconds; a very intense reaction follows, with necrosis of the diseased area. The part must be treated with full antiseptic precautions, and even then the healing process will take from two to three weeks. In all the cases I have referred to complete healing has taken place, and so far as one can tell at this stage the result is a complete success. It is, of course, too soon to say if the cures will be permanent.

Moles and warts.—The application of carbon dioxide is so successful here that it is almost safe to say that there should never be a failure. For a pigmented and hairy mole the crayon should be trimmed to the shape of the growth and applied with firm pressure for from 30 to 40 seconds. In the reaction that follows the pigment is absorbed and the hairs fall out. I am not yet sure if this epilation has any permanence. In treating common warts I do not time the application, but hold the crayon in contact until a narrow zone around the base of the growth is white and frozen. This is essential. In a few days the wart is found to be raised out of its place, and easily separates off.

In conclusion, I wish to say that I am glad to have had an opportunity of relating what I have done with this important and fascinating substance. I hope and trust that my experience will be of use to others, from whom I also hope to learn something more about it before the close of this congress.

Upper Wimpole-street, W.

THE RESEARCH DEFENCE SOCIETY.—It has been for some time felt desirable by the members of the South-West London Medical Society and the members of the Wandsworth division of the British Medical Association that a branch of the Research Defence Society should be formed in the south-western district of London. A joint meeting of the councils of the two societies was recently held and a provisional committee was appointed with Dr. M. G. Biggs as President and Dr. C. M. Young as honorary secretary. The subscription for membership is 5*s.* or for associateship 1*s.* per annum, and all inquiries concerning membership should be addressed to Dr. C. M. Young, 115, Broomwood-road, Wandsworth Common, London, S.W.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Hospital Infection of Tuberculosis.

A MEETING of the Medical Section was held on April 26th, Dr. J. MITCHELL BRUCE being in the chair.

Dr. J. EDWARD SQUIRE read a paper on Hospital Infection of Tuberculosis, as exemplified by the Records of the Resident Staff of the Mount Vernon Hospital for the past 15 years. He said that his paper was an inquiry into the extent of the risk of infection from tuberculosis to members of the resident staff of a consumption hospital, based upon personal examination of all members of the staff of the Mount Vernon Hospital for Consumption and Diseases of the Chest on entering and again on leaving the service of the hospital, extending over a period of 15 years. At present the chief material bearing upon this subject available in reference to the chest hospitals of this country consisted in the report of the staff of the Brompton Hospital for Consumption, drawn up by Dr. Theodore Williams in 1882. There were also some figures from the Victoria Park Hospital and from the hospital at Ventnor. Those reports appeared to be based on inquiries from past members of the staff rather than on personal examination of the chest. The present inquiry, though supporting the view that the risk of infection in a well-regulated chest hospital was very small, showed a larger proportion of cases of probable infection than was shown in the statistics hitherto published in this country. It showed also that a certain proportion of cases of tuberculous infection would be overlooked if they relied solely upon the individuals' account of themselves, several unsuspected cases having been detected as a consequence of routine examination of the chest. It was shown also that a comparatively large proportion of applicants for posts—especially on the nursing staff—showed signs in the chest of previous infection of tuberculosis, and it seemed probable that residence in general hospitals might be responsible for such infection, or at least for the diminished resistance which made infection dangerous. The inquiry was divided into two main divisions, dealing with (1) the incidence of previous tuberculosis in those applying for posts at Mount Vernon, and (2) the evidence pointing to infection during residence there. 14 per cent. of the nurses and 8 per cent. of the maidservants showed evidence on entry of previous infection. That was chiefly found amongst those who had had previous residence in hospital, whether general or special; for while of those who had previously resided in hospital nearly 20 per cent. showed signs of previous tuberculosis, less than 10 per cent. of those who had never resided in hospital showed such signs. The cases of infection while in residence were eight in number, being 2·5 per cent. of all who remained over three months. Two cases of local infection were recorded, one from a splinter and one from a cut.

Dr. C. THEODORE WILLIAMS, referring to the remark in Dr. Squire's paper that the reports of the Brompton Hospital for Consumption appeared to be based on inquiries rather than on examination of the chest, declared that the evidence drawn up in 1882 in regard to the Brompton Hospital was not evidence made up from hearsay. Any nurse to be admitted to the wards of that hospital had to undergo medical examination and remained under the supervision of the resident medical officer. Referring to the probability of residence in general hospitals being responsible for a certain number of cases of infection of tuberculosis, Dr. Williams pointed out that in his report there were two cases of house physicians that ended fatally which came under the category of infection in practice in general hospitals. He emphasised the necessity of recognising the fact that infection of tuberculosis occurred in the porters at chest hospitals who assisted in the post-mortem room.

Sir SHIRLEY F. MURPHY said that it seemed to him that what was wanted was an investigation on similar lines to those followed by Dr. Squire on a like class of persons but not employed in a chest hospital. Until they had the results of such an investigation they were dealing with figures the

actual meaning of which they found some difficulty in stating. He would suggest elementary school teachers as a like class of person for material in the investigation to compare with the nurses in Dr. Squire's hospital at Mount Vernon.

Professor W. OSLER declared that the medical profession was indebted to Dr. Squire for his paper. He (Professor Osler) had no figures to quote, but his general impression was that in general hospitals the doctors, medical students, and nurses were more infected with tuberculosis than were individuals in the general community. The doctors, students, and nurses showed a considerably greater incidence of the disease than occurred in the population at large. There was no question about the fact that medical men who mixed with tuberculous patients became infected with a small focus, but the soil not being favourable for the seed these doctors did not develop into consumptive patients.

Dr. G. A. HERON said that the conditions favourable to infection of tuberculosis were much more strongly marked in the homes of the poor who furnished the class of hospital patients than in the wards of a well conducted chest hospital or sanatorium. He doubted very much whether a well conducted hospital was not really a much less dangerous place in regard to tuberculous infection than the homes of the poor.

Dr. NATHAN RAW said that in regard to statistics his figures were almost in agreement with those of Dr. Squire. He declared that in a well regulated and well conducted sanatorium, or in the open-air wards of a hospital, the risk of infection from tuberculosis was practically *nil*.

Dr. F. J. WETHERED considered that infection from tuberculosis was more likely to occur in a general hospital than in a special one. He pointed out that the public had become possessed with the idea that tuberculosis was so infective that it was unsafe to live near a hospital for consumption.

Dr. SQUIRE replied.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

The Place of Cæsarean Section in the Treatment of Placenta Prævia.

A MEETING of this section was held on April 14th, Dr. H. MACNAUGHTON JONES, the President, being in the chair.

Dr. HENRY JELLETT read a paper on the Place of Cæsarean Section in the Treatment of Placenta Prævia, in which he said that the question to be considered was, Does Cæsarean section lessen the mortality of placenta prævia for the mother or for the child? It appeared to him that there was rather an exaggerated idea of the mortality caused by placenta prævia. During the last 20 years 32,546 women were confined in the Rotunda Hospital, and of these 138 had placenta prævia. Five of these 138 women died, a percentage mortality of 3·6. With a single exception, however, each of the women who died was either moribund from hæmorrhage or in a condition of advanced sepsis when admitted to the hospital. The treatment adopted in these cases was bipolar version, the bringing down of a foot and leaving the expulsion of the child to the natural efforts. Dr. Jellett continued: The cause of death in placenta prævia in the vast majority of cases is one of three things—namely, hæmorrhage, sepsis, or shock. The method of Braxton Hicks in placenta prævia immediately checks the bleeding, and so completely that no other treatment is required. If the patient is already septic when she comes under treatment, dissemination of the infection is probably less likely after the performance of bipolar version than after Cæsarean section. The latter operation, if followed by hysterectomy, might improve the prognosis as regards sepsis, but this procedure is a very formidable one and very likely to prove fatal. If the patient is profoundly collapsed, Braxton Hicks's treatment, carried out under an anæsthetic, is less likely to aggravate shock than Cæsarean section. It would appear, then, that there is only one class of cases in which Cæsarean section may be advisable—namely, that in which it is impossible to carry out the treatment of Braxton Hicks. There appear to be only three conditions which can render bipolar version impossible in an ordinary case of placenta prævia. The first is a rigid and undilated condition of the cervix; the second is where, after rupture of the membranes, the uterus has contracted down upon the fœtus; and the third is where the presenting part is fixed in the pelvic brim. Of these the first is the most important. In such a case it is possible to dilate or to incise the cervix or to plug the vagina. Forcible dilatation of the cervix is contra-indicated because of the danger of tearing in this condition. If, on the other hand, it is possible to make with safety the deep incisions required for vaginal Cæsarean section in these cases, as the upholders of this procedure contend, then the smaller incisions required to enable the introduction of two fingers should present no danger. Plugging the vagina is, however, the best method of treatment in such conditions. The third class of case, in which the presenting part is fixed in the pelvis, is not usually serious. If the hæmorrhage persists it can be dealt with by plugging if the patient is in labour; by rupture of the membranes if she is not in labour; or by extraction if the os is fully dilated. Even if after plugging the vagina the hæmorrhage persists in a case of unavoidable hæmorrhage, bringing down the leg will always check it; and, therefore, this method could be employed with success after, if necessary, a preliminary incision of a rigid and undilated cervix. I may, therefore, sum up my views on the value of Cæsarean section as a means of reducing the maternal mortality. There does not appear to be any place for this operation in the modern treatment of uncomplicated cases of placenta prævia. In a few exceptional cases with a rigid condition of the cervix or premature rupture of the membranes, associated with an unhealthy atonic condition of the uterine muscle, it may be indicated. Such a condition might be treated by the vaginal plug, and, if internal hæmorrhage then result, by Cæsarean section; but, personally, I should be inclined to treat such a case, if plugging failed, by incision of the cervix and the performance of bipolar version. I am unable to see any place for Cæsarean section in the treatment of placenta prævia. What we really require in these cases is an advance in our methods of treating the collapse of hæmorrhage, and the shock, and of combating infection; as thus we could reduce the present mortality and save some of the patients who are apparently moribund when they first come under treatment.

The PRESIDENT having expressed the indebtedness of the section to Dr. Jellett for the valuable paper which they had heard, said that he still believed in the soundness of the principles which he had taught students in the past to follow in the management of the different forms of placenta prævia—the two most important methods being bipolar version and plugging. The most complete summary of the entire subject was contained in the recently published brochure of Dr. Ludovico Moncalvi, Professor Mangiagalli's assistant in the Institute of Obstetrics and Gynæcology in Milan. In 1821 deliveries during the years 1907, 1908, and 1909 there were 45 cases of placenta prævia, with a mortality of six of the latter—four of the fatal cases being central. Bipolar version was not possible in any of these. Sepsis and death followed the one case of Cæsarean section. Professor Pinard of Paris, at the Baudelocque clinic, had informed him (the President) that from 1898–1908 there had been 183 cases of placenta prævia with four deaths, a mortality of 2·18 per cent. No Cæsarean section had been performed, but there had been one Porro's operation in a case of pelvic deformity, with a successful issue. Compare this with the result in Professor Krönig's practice, which he had kindly sent to him from the Freiburg clinic. Out of 40 cases of placenta prævia there had been one death—that is 2·1 per cent. 20 Cæsarean sections had been performed and no death.[1] In coming to any just conclusion from statistics, they should know the accessory conditions which attended on the placental presentation, whether it was central or marginal, the presentation, size, and position of the fœtus, the period and type of the labour, whether a primipara or multipara, or if associated with any deformity of the pelvis.

Dr. HERBERT R. SPENCER said that Dr. Jellett had done well to call attention to the small mortality which attended the performance of bipolar version. The cases which terminated fatally did so as the result of severe hæmorrhage and infection before the treatment was adopted, and would not be saved, but would be further imperilled by the performance of Cæsarean section. He did not utterly condemn the operation, but thought it justifiable in a very few rare cases of central placenta prævia at or near full term with an undilated rigid cervix. Personally, he had seen only one case of placenta prævia in which he thought Cæsarean section would have been justifiable. If, however, the interests of the child were to be placed on the same level as

[1] Vide THE LANCET, April 30th, 1910, p. 1227.

those of the mother—a position he disagreed with—then the use of de Ribes's bag or Bossi's dilator greatly improved the chances of the child surviving. He called attention to the remarkable series recorded by Krönig and Sellheim of 26 cases of placenta prævia treated by Cæsarean section with no maternal or fœtal mortality.

Dr. F. H. CHAMPNEYS thought that in placenta prævia the child must take its chance, and that any special attempt to improve the chances of the child would be at the expense of the mother. He thought it of importance that in any obstetric question the best treatment could be carried out by nature's weapons, in this instance by Braxton Hicks's bipolar version.

Dr. C. E. PURSLOW thought that plugging the vagina, if done efficiently, gave good results.

Dr. AMAND ROUTH agreed with Dr. Jellett that there was no place for Cæsarean section in the ordinary or routine treatment of placenta prævia. An American text-book, recently published, suggested that Cæsarean section might be done when the ante-partum hæmorrhage was uncontrolled by a tampon, where the os was undilated, the woman not much affected by the hæmorrhage, the child at term and living, and the patient uninfected and with a good environment. This would mean that Cæsarean section would become the general treatment of cases of placenta prævia seen in their early stages, and would be undertaken before a sure diagnosis was made and before dilatation of the cervix and Braxton Hicks's method of version had been attempted. This is clearly inadmissible and unjustifiable, but it is quite possible that it would be good treatment in some of the cases described by Dr. Jellett where the cervix was rigid and undilatable. According to Dr. Jellett this condition occurred in 4 or 5 per cent. of all cases. He recalled such a case more than 20 years ago, where serious ante-partum hæmorrhage had taken place in a primipara at a seaside resort. When he reached the patient he found the vagina plugged by the medical man in charge of the case, the external os was closed, and only with the greatest difficulty—after two hours under deep anæsthesia—could he get two fingers in, and eventually was able to bring down a foot and arrest the hæmorrhage. Next morning the cervix was still absolutely rigid, and did not yield for another 15 hours, when the child was born. The cervix was, however, torn, and the patient eventually died from sepsis. If he had had that case to-day, with the added 20 years' experience, he would certainly perform Cæsarean section.

Dr. W. J. GOW thought it important to remember that there were different varieties of placenta prævia, and it was only in a central placenta prævia that treatment by Cæsarean section should be considered. He had performed Cæsarean section for one case of central placenta prævia in which the mother and the child did well. He thought the indications for such a line of treatment were as follows—that the placenta be centrally situated, that the os be small and rigid, that free bleeding occurred on any manipulation, that the surroundings were favourable, that the mother was not in a state of collapse, and that the child was alive and near full term. In post-partum hæmorrhage occurring in cases of placenta prævia he thought it probable that the bleeding generally came from lacerations produced during extraction of the child. Another class of case in which he thought Cæsarean section indicated was when the patient had a purulent vaginal discharge in addition to a central placenta prævia, as this class of case was very likely to be followed by grave septic infection.

Dr. W. S. A. GRIFFITH had performed Cæsarean section for placenta prævia on one occasion with a favourable result for the mother and the child. He thought it monstrous to talk of Cæsarean section as the treatment for placenta prævia except in very rare and exceptional cases. It was only in cases of great difficulty and danger to mother and child that the operation should be performed.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Multiple Myelomata.—The Senile Heart.

A MEETING of this society was held on April 28th, Dr. T. R. BRADSHAW, the President, being in the chair.

Dr. JOHN HAY showed a girl, aged 10 years, who for two years had suffered from Complete Paralysis of the Right Arm, hysterical in nature, and accompanied by Charcot's blue œdema. After ten applications of the faradic current complete power had returned to the arm and the œdema had disappeared.

Mr. T. C. LITLER JONES showed a patient from whom he had removed a large Cerebral Tumour from the right Rolandic region. For seven months prior to the operation there had been paralysis of the left arm and leg with twitching in the toes. The cerebration was slow with echolalia. Slight double optic neuritis was present. The operation was done in two stages, much relief following the first stage. The differentiation of the tumour from the brain substance was determined by palpation. Profuse hæmorrhage from the longitudinal sinus was controlled by gauze plugging. The plugging was only gradually removed, being replaced by smaller quantities. The tumour measured 5¼ inches in length and weighed over 4 ounces. It resembled in shape and size a normal kidney. In spite of a fracture of the neck of the left femur from a fall the patient was slowly regaining power. Vision was now unaffected and the mental condition had returned to the normal.—Dr E. E. GLYNN stated that the tumour was a hæm-endothelioma, probably non-malignant.—Mr. RUSHTON PARKER thought that the method of operation in two stages conduced to success.

Dr. O. T. WILLIAMS read a note on a case of Multiple Myelomata in a man aged 37 years. The patient died two months after the first symptoms appeared. Within one month after the onset the first and second ribs on each side had become almost completely absorbed. The sternum fractured at the gladiolo-manubrium, the lower portion pressing on the great vessels and giving rise to a murmur which was audible at a little distance from the chest. The ligaments of the sterno-clavicular joint on the left side were absorbed and the inner part of the clavicle was drawn up into the neck. There was evidence of absorption of bone in the lower cervical and upper dorsal vertebræ. The urine was at first clear and later was quite milky when passed. The Bence-Jones protein reaction was present on most occasions, but at times only a phosphorus-free glyco-protein was observed giving the reactions of mucin. The protein was separated and found to contain a carbohydrate radical and a high percentage of sulphur. The output of ethereal sulphates varied from day to day. The evidence obtained from a study of the protein isolated showed the probability of it being derived from the chondromucoid. The calcium in the urine was much increased and an unusual deposit of sodium urate was found.—Dr. GLYNN stated that the tumour was composed of round cells which were typically myelomatous.—Mr. C. THURSTAN HOLLAND showed and described a series of radiographs of the bones of Dr. Williams's patient which he called one of osteo-psathyrosis, the changes being due to a disappearance of the opaque bone salts. Radiographs of the right and left kidneys showed calculi in both.—The PRESIDENT said that Dr. Williams's case was clearly one of multiple myeloma. A peculiar protein was present in the urine, but he had not found the reactions indicating the presence of myelopathic albumose in the specimens submitted to him, though Dr. Williams had found them in other specimens. He had long held that cases of multiple myeloma with albumosuria were essentially different from those without it and Dr. F. Parkes Weber had lately expressed the same opinion. Cases like the present where its presence was intermittent had not been contemplated. Possibly here there was also the same error of metabolism, but this had been arrested at different stages.

Dr. JOHN HAY read a paper on Certain Aspects of the Senile Heart. The senile heart is a local manifestation of general arterio-sclerosis which in premature senility tends to be focussed in one or other viscus, nor infrequently in the heart. The early manifestations of such a change are of two kinds: 1. Signs of diminished reserve power of the heart. 2. Certain varieties of irregular action; these may be (*a*) extra systoles, (*b*) complete irregularity, (*c*) the alternating pulse. The most important of these is the last. The arrhythmia cannot be taken as any evidence of the extent of the arterio-sclerosis. It may attack a heart which is only moderately affected by the sclerotic change and, on the other hand, advanced cases of cardiac sclerosis may exhibit a regular action even up to death. For practical purposes patients afflicted by this complete irregularity can be classified in three groups: (1) characterised by an insidious onset of the arrhythmia and only slight interference with the

cardiac reserve; (2) paroxysms of irregular action which finally become persistent, with limitation of the field of cardiac response; and (3) serious cardiac failure as the result of the inception of complete irregularity. Typical cases illustrating each group were reported and graphic records demonstrated. The prognosis was dealt with in relation to each of the above clinical groups, and the prognostic importance of the presence of the extra systoles and the alternating pulse was duly considered. Treatment included a careful consideration of the rôle of digitalis in such cases, its dangers and uses.—Dr. H. R. HURTER drew attention to the frequency of cerebral thrombosis in patients in whom the nodal rhythm had presumably become established. He had lost three patients from thrombotic hemiplegia within a few weeks of the inception of the abnormal rhythm; a fourth patient was just recovered from such an attack of hemiplegia. He considered that the liability to this complication should not be lost sight of in formulating a prognosis in any arrhythmia caused by the contraction of the heart originating elsewhere than in the mouth of the great sinus. He corroborated Dr. Hay's statement as to the extreme gravity of the pulsus alternans.—The PRESIDENT remarked that the use of the polygraph had thrown much light on the real nature and significance of the irregular pulse; it was not desirable, however, or practicable to use this elaborate instrument in every case, but the knowledge gained by its use was of the greatest value in the signs elicited by the ordinary methods of clinical investigation.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—Two clinical meetings were held on April 7th and 21st, at which Mr. George Wilkinson, the President, occupied the chair.—Among the cases shown and demonstrations given were the following:—The President demonstrated Bárány's Labyrinthine Tests.—Dr. Herbert Henry showed: 1. A case of Fracture of the Cervical Spine in a man with dislocation between the fifth and sixth vertebræ. The injury resulted from a fall downstairs. Except for some slight local tenderness, no symptoms developed till six weeks after the accident, when the patient complained of stiffness, due to atrophy of the left shoulder muscles. There were now atrophy of the shoulder muscles of both sides and severe nerve root pains. 2. A boy with Atrophic Muscular Dystrophy where there was evidence of transmission through the female.—Mr. W. S. Kerr showed: 1. A woman with Acute Mastoiditis with a large Perisinous Abscess, following an acute otitis, and cured by simple mastoid drainage. 2. A girl with Perisinous Abscess and Thrombosis of the Lateral Sinus. There had been no rigors and the thrombosis was only discovered on operation. The internal jugular was ligatured. 3. A case of Perceptive Deafness with Facial Paralysis and Anæsthesia of the same side and Loss of Taste in the anterior two-thirds of the tongue. No vestibular reaction could be obtained on that side. The condition was evidently one of syphilitic pachymeningitis.—Mr. G. H. Pooley showed cases illustrative of Congenital and Hereditary Abnormalities and Diseases of the Eye, including (1) abnormalities of the palpebral opening: dermoid of the upper lid; (2) abnormalities of the iris; (3) congenital dislocation of the lens in two sisters; (4) medullated nerve fibres in the retina; (5) partial coloboma of choroid and retina; (6) buphthalmos in two cousins; and (7) hereditary diseases, retinitis pigmentosa and nystagmus.—Dr. A. G. Yates showed: (1) A case of Spleno-medullary Leukæmia, showing considerable reduction in the size of the spleen and in the number of leucocytes under X ray treatment; (2) a case of Lichen Pilaris, showing small horny spines surmounting brownish red papules on the face, which is an unusual situation; and (3) a boy with Myoclonus supposed to have been caused by a caning at school.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on April 26th, Sir John Tweedy, the President, being in the chair.—Mr. Ross Brown opened a discussion on the Legal Responsibilities of Hospital Authorities. He reviewed the decisions of the Court of Appeal in Hillyer *v.* The Governors of St. Bartholomew's Hospital and in Hall *v.* Lees, and the considered judgment of Mr. Justice Walton in Evans *v.* The Liverpool Corporation. The result of these decisions appeared to be that the authorities of public hospitals did not undertake to perform the duties of medical men or to give medical advice, but that they did undertake that the patients should have competent medical advice and assistance. Their obligation was that the patient should be treated only by experts, whether surgeons, physicians, or nurses, of whose professional competence the hospital governors had taken reasonable care to assure themselves. The relation of master and servant did not exist between the governors and the professional staff, and, providing reasonable care had been exercised in selecting a competent staff and proper apparatus and appliances, the governors were not liable for the negligence of the staff. The nurses and others assisting at an operation ceased for the time being to be servants of the governors of the hospital, inasmuch as they were under the sole orders of the operating surgeon, who, until the operation was completely finished, was supreme. The contract of the hospital authorities was not to nurse during the operation, but to supply nurses and others in whose selection they had taken due care. It was a remarkable fact that although some of these great institutions had been actively discharging their philanthropic duties for centuries, and within their walls many thousands of the population were medically or surgically treated every year, it was only quite lately that the law courts of this country had been called upon to discuss the principles governing the relationship of hospital authorities and patients. It was gratifying to find that the result of these judicial decisions was not calculated to discourage or in any way cripple the noble work which the hospitals were doing in the relief of human suffering.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Infirmary on April 19th, Dr. W. Ward-Smith being in the chair.—Dr. W. Mitchell exhibited Skiagrams of the Hand showing undescribed bone changes associated with tuberculous arthritis. The photographs showed a curious striated appearance of the long bones, the meaning of which was as yet undiscovered.—Dr. A. Bronner read notes on (1) a case of Empyema of the Maxillary Antrum operated on by the Caldwell-Luc method; (2) cases of Deviation of the Nasal Septum treated by submucous resection; and (3) a case after Killian's operation on the frontal sinus.—Dr. J. Basil Hall read notes on 53 cases of Intestinal Obstruction. The most noticeable point was the enormous death-rate in the cases of obstruction by band, the reason being that these cases were only seen too late owing to the very deceptive onset of the symptoms. All text-books state that these cases commence suddenly, but experience shows that this is not so. The onset is very gradual, and the symptoms at first are very slight, and it may not be until the intestine is nearly gangrenous that the decisive symptoms appear. Some excellent lantern slides of various specimens were shown.—Dr. Ward-Smith said he thought that visible peristalsis should always be looked for and was a certain sign of obstruction.—Dr. T. Jason Wood agreed with Dr. Ward-Smith, and instanced several cases showing the difficulty in diagnosis.—Dr. Mitchell, Dr. A. H. Bampton, Dr. A. F. Martin, Dr. J. H. Rawlinson, and Mr. F. W. Goyder also spoke.—Dr. Hall then replied.

INVALID CHILDREN'S AID ASSOCIATION.—By the kindness of the Duchess of Marlborough the annual meeting of the Invalid Children's Aid Association (London) Incorporated, 69, Denison House, 296, Vauxhall Bridge-road, S.W., was held on April 27th in Sunderland House. The chair was taken by Her Grace, who pleaded the needs of the association with much force. She reported a new departure in the work of the association by the acquisition of a special home, for which the sum of £500 a year would be required. Towards this amount she promised £200 if a further £300 could be raised. The Bishop of Bath and Wells followed. He dwelt on the need of personal service. Dr. Robert Hutchison and Mr. D'Arcy Power spoke on the medical aspect of the association, and Mrs. Carl Meyer as a member of a care committee made an appeal for workers and funds for the East-End. Miss MacNaughtan enlarged on the need of more visitors for the invalid children. The meeting, which was largely attended, adopted the report of the society, and votes of thanks were passed to Her Grace and the speakers. At the close of the meeting the Duchess entertained her numerous guests at tea.

Reviews and Notices of Books.

The Medico-Chirurgical Series. No. 2: The Stomach, Intestines, and Pancreas. By W. C. BOSANQUET, M.A., M.D. Oxon., F.R.C.P. Lond., Assistant Physician to Charing Cross Hospital and to the Brompton Hospital; and H. S. CLOGG, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon to Charing Cross Hospital, Senior Surgeon to the Evelina Hospital for Sick Children. Edited by JAMES CANTLIE, M.A., M.B., C.M. Aberd., F.R.C.S. Eng., Surgeon, Seamen's Hospital Society, Lecturer on Surgery, London School of Tropical Medicine. London: John Bale, Sons, and Danielsson, Limited. 1909. Pp. 665. Price 12*s.* 6*d.* net.

THE collaboration of a physician and a surgeon to deal with diseases of the alimentary system, which so frequently touch the arbitrary boundary between their respective provinces, should serve to produce a valuable handbook. Dr. W. C. Bosanquet and Mr. H. S. Clogg have carried out their task in a thoroughly satisfactory manner and we can cordially commend the book before us as giving sound and carefully weighed advice in regard to many of the complex problems involved in the diagnosis and treatment of the various maladies with which it is concerned. In their preface the authors state that owing to the limitations of space they have been compelled to discuss these problems briefly and dogmatically, and they deprecate such dogmatism as unscientific, but, in our opinion, their choice of methods has tended towards eclecticism, and the result is a book which is thorough without being unwieldy, affording a practical rather than a mere scientific or theoretical discussion of the subject.

The book is divided into four sections, of which the first is devoted to the Surgical Anatomy of the various organs concerned. The descriptions given, though brief, are clear and sufficient, and are well illustrated by outline diagrams. Three of these, indicating the directions of extension of pancreatic growths in relation to adjacent abdominal viscera, may be mentioned as being especially useful. This section also contains general directions in regard to the examination of the patient, with short accounts of the methods of investigation of the gastric contents and of the fæces. This part is so brief as to do little more than indicate the general methods of qualitative analysis, no reference being made to the quantitative investigation of the gastric contents. In this respect the authors have carried their condensation too far, and we are of opinion that further details in these matters would be an improvement in a subsequent edition.

The second section deals with Affections of the Stomach. A useful account is given of the various conditions grouped under the name of functional disorders. These are differentiated in so far as is possible at present, and the appropriate treatment, both general and symptomatic, is described. The inflammatory conditions affecting the stomach are next considered, and the different forms of gastritis are described. The important subjects of gastric and duodenal ulcers, with their diagnosis and the choice of treatment, are then dealt with in some detail, and useful rules are given in regard to the indications for operation in these cases. These general directions are characterised by sound judgment and are worthy of special note. The various operative procedures are described and illustrated by diagrams. The diagnosis of perforation and of localised suppuration after perforation is carefully discussed and directions for treatment are given. In like manner the clinical manifestations of dilatation of the stomach are described and the choice of medical or surgical treatment is discussed. Another gastric disease which is very carefully considered is that of cancer of the stomach; the importance of early diagnosis is insisted upon and the various modes of treatment and their results are well set forth. Clear accounts are also given of congenital hypertrophic stenosis of the pylorus, of perigastric adhesions, subcutaneous injuries of the stomach, and of foreign bodies in its cavity.

The third section, which is much the largest, concerns Diseases of the Intestines, and owing to the numerous conditions of these structures which require operative procedure is a subject which lends itself especially to the joint medico-chirurgical consideration which is the special feature of this book. Space forbids a categorical review of the various subjects considered, but the difficult and complex condition of intestinal obstruction is dealt with in such a clear and instructive manner as to merit special notice. The classification given by the authors is convenient, their remarks on diagnosis are to the point, while their observations on treatment are throughout practical. Diseases of the appendix and their sequels are, as might have been expected, dealt with at some length. The clinical characters of the various forms of appendicitis are clearly outlined, and the diagnosis and treatment are critically discussed. General rules and warnings well worthy of study are set forth, and the question of removal in a quiescent period is considered. This section concludes with a useful description of the various operations usually performed on the intestines, with diagrams illustrating the methods of excision, suture, anastomosis, and other procedures.

The Pancreas and its Diseases are dealt with in the fourth section. The difficult subjects of acute pancreatitis and pancreatic hæmorrhage are discussed, and in the light of recent statistics the authors advise that in cases of severe symptoms referable to the pancreas the abdomen should be opened. The other diseases and morbid conditions of the pancreas are briefly considered and their diagnosis and treatment are discussed. An appendix contains some specimen formulæ, such as alkaline and acid bitter mixtures, bismuth mixtures, anti-diarrhœics, antacid powders, and iron tonics.

We have already laid stress upon the practical character of this book. It is of convenient size, well printed, and bound in a limp leather cover. It should prove very useful to practitioners in giving advice in regard to the choice of medical or surgical treatment in difficult cases.

Myomata of the Uterus. By HOWARD A. KELLY, Professor of Gynæcology in the Johns Hopkins University; Gynæcologist-in-chief to the Johns Hopkins Hospital; and THOMAS S. CULLEN, Associate Professor of Gynæcology, Johns Hopkins University; Associate Gynæcologist to the Johns Hopkins Hospital. Illustrated by AUGUST HORN and HERMANN BECKER. London and Philadelphia: W. B. Saunders Company. 1909. Pp. 723. Price 35*s.* net.

THAT the preparation of this monograph must have entailed a large amount of labour and time is apparent whether we regard the book itself or consider the amount of material upon which it is based. The total number of cases upon which the authors' conclusions are formed amounts to no less than 1674. In view of the enormous experience obtained by the treatment of such a number of patients, we think the authors were well advised to give us only their own views and not to attempt to review the vast amount of current literature on the subject of myomata of the uterus. The present volume therefore deals exclusively with the work done by those connected with the gynæcological department of the Johns Hopkins Hospital and of the Johns Hopkins University.

Dr. Cullen's book on cancer of the uterus is well and favourably known to gynæcologists, and it is not surprising that the publication of the present work has aroused much interest among all those engaged in this special branch of medicine.

It has already taken its place as the standard work of reference upon the subject, and when we remember the large part played by the Baltimore school in the evolution of many of the operations employed in dealing with these tumours this is not to be wondered at. Dr. Cullen has had the inestimable advantage of watching, and, indeed, of playing his own part in the gradual simplification of the procedures employed for the removal of these tumours, but we doubt if there is any practising gynæcologist in the world who does not owe some debt to the man who, as Dr. Cullen so truly says, has done more almost than anyone else to simplify and to diminish the danger of these operations—his co-author, Professor Howard Kelly. When the Johns Hopkins Hospital was first opened in 1881 many myomata were still considered inoperable, while at the present day to find a tumour which cannot be dealt with one way or another is indeed a rare occurrence. Those of us who are constantly practising Kelly's method of removing fibroid tumours with ease and safety are perhaps prone to forget the debt we owe to his genius and originality of mind. The records of his work which this splendid monograph contains will go far towards rendering any such forgetfulness impossible.

The book contains a complete account of the symptoms, pathology, and treatment of fibromyomata of the uterus, and the detail with which all the more interesting cases are recorded renders it of the greatest possible value. It is well worthy of the high standard we are accustomed to look for in the publications emanating from this source. At the same time, it must be remembered that the staff of the Johns Hopkins Hospital have every possible encouragement to produce good work. They lack for nothing either in the way of equipment or of material, and not only is the clinical part of their work done under the best conditions but they are enabled to complete it on the pathological side with equal facility, while they can have the results of their labours recorded by such artists as those who have taken part in the beautiful production of this volume.

With regard to the pathology of fibromyomata, the point in which perhaps most interest is taken at the present time is the sarcomatous degeneration of these tumours. Is this a possible or a common form of degeneration? The authors' experience is as follows. Of 1400 cases 17 showed definite signs of sarcoma, and in 17 others there were suspicious changes not sufficient to warrant a certain diagnosis of sarcoma. In 13 of these 17 cases the sarcoma was apparently the result of a transformation of the myomatous muscle fibres, and in one further case the sarcoma seemed also to have resulted from an alteration in the muscle fibres. From their experience the authors are impressed with the apparent tendency to sarcomatous degeneration created by the presence of a primary hyaline change. The early cell changes present in a myoma undergoing sarcomatous degeneration are beautifully shown in the series of illustrations Nos. 147 to 155. The possibility of finding sarcomatous change in an apparently simple myoma appears to us the strongest possible argument for treating all cases of fibromyomata by total hysterectomy. The authors recommend that in every case the uterus should be laid open at the time of the operation and the tumour examined carefully. But that even this precaution may fail and that the presence of a sarcoma may be overlooked even in the laboratory, after a much more complete examination than is ever possible in the operating theatre, is well shown by the case alluded to on p. 180. Here two years after a supravaginal hysterectomy the patient had definite signs of intraperitoneal hæmorrhage. At the operation a large irremoveable sarcoma was found developing in the stump of the cervix. On re-examination of the original tumour sarcomatous change was found readily recognisable, although it had been overlooked in the laboratory. It is quite certain that those surgeons who habitually practise supravaginal amputation for fibromyomata of the uterus, even if they follow the plan of opening the tumour at the time of operation—a method which has the great disadvantage of often spoiling the specimen for museum purposes—will overlook sooner or later a case of sarcoma of the uterus. The authors are strong advocates for the so-called subtotal hysterectomy, but we confess that the plan they recommend of opening every tumour on removal does not seem to us a certain method of preventing the occasional mistake of regarding a sarcoma as a myoma, especially in view of the fact that the distinction is often difficult even on a careful examination carried out in the pathological laboratory. No doubt when practised in some ways total hysterectomy is the more dangerous operation, and will continue to be so for the inexperienced operator, but Doyen's method of performing the operation appears to us to overcome certainly most of its dangers, and the question is one which even the large experience of the authors of this work cannot be held to have settled once and for all. For our part, we believe that total hysterectomy will be more and more practised in the future and that it is in reality the better operation of the two, although at the present time possibly, though this is by no means certain, it is attended by a slightly higher mortality.

In some ways more important from the pathological point of view than the certainly sarcomatous tumours are those in which the conditions on microscopical examination were only suspicious. A careful examination of the cases related of this kind should make everyone who is called upon to come to a decision upon this difficult question appreciate what a great degree of resemblance certain degenerating fibroids may bear to malignant tumours. In about 1·7 per cent. of the cases examined adenocarcinoma of the body of the uterus was present with myomata. The suggestion that sterility seems in some way to be associated with the development of cancer in the body of the uterus in these cases appears to be borne out by the table given on p. 275. The statement on p. 277 that when carcinoma of the body exists the chances of infection and death are considerably increased might well be brought forward as a strong argument against the treatment advocated in the same paragraph—namely, supravaginal amputation with subsequent removal of the cervix if the body of the uterus contains a malignant growth, a procedure especially likely to be followed by infection of the peritoneum. However, we do not wish to labour the point of the advantages of total removal of the uterus, and in differing from the authors we must remember the great weight which attaches to any recommendation of theirs in view of their vast experience and of the extremely good results they have obtained. A series of 238 cases in two and a half years with only two deaths, a mortality of 0·85 per cent., is one which is not likely to be surpassed when we remember that the cases are not picked and that the figures include all the cases for those years. The mortality of all the cases from 1889 to July 1st, 1906, was between 5 and 6 per cent., a mortality which the authors regard as high, but one which we think would compare most favourably with the results of any other hospital during the same period.

There are many features in this work which command attention, although we do not specially allude to them. This is because we consider that the book is one to be read by every gynæcologist, and we can promise such readers not only great profit but also great pleasure from doing so. The illustrations are well drawn and well reproduced, and if at times, as it appears to us, the artist has allowed his desire to produce a pleasing picture to get a little the better of his fidelity to nature the results

attained more than condone for any such slight lapses from the strict truth. We are accustomed to look for excellence in any monograph published by the teachers of the Johns Hopkins School and certainly in the present instance we have no cause for dissatisfaction.

A Text-book of Physiology for Medical Students and Physicians. By WILLIAM H. HOWELL, M.D., Professor of Physiology in the Johns Hopkins University, Baltimore. Third edition. London and Philadelphia: W. B. Saunders Company. 1909. Pp. 998. Price 18*s.* net.

TWO years ago the second edition was published, but even in this relatively short time a large amount of new material has been added to the literature of the subject. The author has done his best to revise, correct, or modify imperfect statements in previous editions, to add new facts, and to give an account of new theories or points of view which are characteristic of the present stage of development of the subject. Many new facts acquired by the use of recent physical methods have been added. To take a concrete example, we are glad to see an account of the string galvanometer of Einthoven, an instrument which is finding a wide application in the analysis of many recondite phenomena in living organs. The general arrangement of the text-book remains substantially unchanged. The author has made a judicious selection from the immense mass of material old and new. Such a subject as sleep is more fully treated of than is usual in most English text-books. A knowledge of blood pressure and the methods by which it can be determined in man is of prime importance. The whole question is very fully treated and will well repay perusal both by student and practitioner. There is an excellent account of the musculature of the heart, including figures of the arrangement of the heart fibres, but having regard to the word-picture of the auriculo-ventricular bundle and its asserted importance in cardiac rhythm, perhaps a figure illustrating the course, connexions, and distribution of the *a-v* bundle would have added the visual to the graphic and impressed the facts on the reader's memory.

There can be little doubt that, having regard to the recent researches of Loeb and others, the importance of "ions" must attract investigators, and for this reason we welcome the author's account of Faraday's "Wanderers," or "ions," as they bear on the question of the beat of the heart and other cognate phenomena. The illustrations of blood pressure as shown in tracings by Dawson are excellent. Under the heading "Fixed Adjustment of Rate"—i.e., of the heart—the number of beats of the heart per minute in mice is given as 670, the authority being Buchanan. Having regard to the improvements "in the methods of so-called practical physiology," the student would have welcomed an illustration or two by the X ray method, as applicable to the beat of the heart, the passage of food along the intestine, or the opacity of bone and relative transparency of cartilage.

The chapter on Internal Secretions is comprehensive, suggestive, and well illustrated. The illustrations of the researches of Miss Claypon and Starling on the influence of injections of extracts of fœtus on mammary glands in virgin rabbits, had they been added, would have visualised in a way no description can do the far-reaching effects of "chemical messengers" or "hormones"—the modern realisation of the winged sandals of the messenger of the gods. We have looked for but did not find an account of the organs of voice. Special attention is given to Rubner's recent "Problems," contributions to growth upon the basis of the energy factor.

The work maintains the high standard aimed at by its author, and it is sure to prove both attractive and instructive. Perhaps when the next edition is called for the author will give us in his own and ever interesting manner a chapter on "emotions" in their broad and catholic relations. The work of Sherrington and Mott points the way.

Health, Morals, and Longevity. By GEORGE GRESSWELL, M.A. Oxon. & Cape of Good Hope, L.R.C.P. & S. Edin., L.F.P.S. Glasg.; and ALBERT GRESSWELL, M.A., M.D. Oxon., M.R.C.S. Eng., Fell. Roy. Soc. Med. Bristol: John Wright and Sons, Limited. 1909. Pp. 229. Price 5*s.* net.

THE object the authors of this book had in view in writing it was, according to the preface, to present a short *résumé* of the more important conditions for living a healthy life, considered both from the standpoint of the individual and that of the community. They treat of many factors concerning personal hygiene and public health questions in a popular manner, explaining in clear and simple language some of the technical details underlying them. The subjects dealt with are too numerous to permit of reference to all of them, but among other things chapters are devoted to the germ theory, climate, pain, sleep, nutrition, clothing, soil, education, and death. In connexion with "the germ theory," the rôle of micro-organisms in disease is explained, and the importance of the notification of disease and of adequate precautions against infection is emphasised. In the chapter devoted to nutrition and foods the various forms of food are discussed, and their nutritive value is indicated. The dangers arising from infected or improperly prepared foods are also set forth. The subject of clothing is considered from a common-sense point of view, and some general information in regard to the texture and fabric of the materials used in making clothes is given. Soil and water are discussed at some length, and the methods of water-supply and of the purification of water are described. A number of appendices are given dealing with immunity, phagocytosis, and bovine milk in reference to tuberculosis. The authors are less happy in these than in the remainder of their book, since the necessarily brief descriptions tend to inaccuracy or obscurity—as, for example, on p. 208, in connexion with opsonins, the statement is made that the serum from an infected person is only half as powerful as that of a healthy one. Again, in the appendix on insomnia and narcolepsy it is surely unwise to discuss in a book presumably intended specially for a lay public the administration and dosage of hypnotic and narcotic drugs.

The authors supply a large amount of useful information, and in general they counsel care and moderation in regard to the ordinary circumstances of life. It is possible that their somewhat discursive and allusive style may appeal to a class of reader to whom a book avowedly devoted to hygienic questions might not commend itself.

Emergencies of General Practice. (Oxford Medical Publications.) By PERCY W. G. SARGENT, M.B., B.C. Cantab., F.R.C.S. Eng., Surgeon to Out-patients, St. Thomas's Hospital; Surgeon to the National Hospital for the Paralysed and Epileptic, Queen-square; and ALFRED E. RUSSELL, M.D., B.S. Lond., F.R.C.P. Lond., Physician to Out-patients, St. Thomas's Hospital. With 91 illustrations. London: Henry Frowde and Hodder and Stoughton. 1910. Pp. 364. Price 15*s.* net.

THE keynote of the Oxford Medical Publications has been the practical character of the subjects undertaken. Both this series of volumes, and the smaller one which preceded them, to which Mr. Percy Sargent has also contributed, deal largely with surgery from the most practical standpoint. There are many thousand general practitioners in Great Britain and Ireland, and many more in the Colonies, who are constantly called upon to perform any bold surgery at a moment's notice and under difficult conditions. Such men are well trained and equipped in essentials, are quite apt in

diagnosis, but are liable in the course of years to fall behind in the selection of the best procedure by which to deal with the emergency which presents itself. Here lies the value of the volume before us.

Systematic works on surgery, however encyclopædic, either fail to give the details of procedure for handling urgent conditions, or are so bulky as to render it difficult to find them. The authors have laid down a general principle of great value, not to attempt to offer their readers alternatives, or numerous methods of dealing with acute conditions, but have selected from their own experience and judgment one method for each case, which may not in all cases be the best, but has proved to be one of the best. The tone of advice in procedure is sound and thoughtful throughout, but the most modern, and even tentative methods, are not overlooked. As an instance the treatment of simple fractures is laid down on conservative principles which to some might appear old-fashioned, but the authors explain carefully why treatment without splints is applicable to only selected cases. The best parts of the book are those dealing with acute abdominal conditions and with the surgery of the brain and spinal cord, a province of operation which Mr. Sargent's personal opportunities have enabled him to handle with the distinction of direct knowledge.

The section on the emergencies of acute infective disease is well conceived and indicates the value which attaches to a practical grasp of bacteriology. The use of information in this department is also illustrated by an excellent adage formulated when treating of the subject of serious wounds: "The assumption that the wound is already infected offers no excuse for carelessness in any single detail. The probable presence of micro-organisms in the wound is no excuse for the introduction of others probably of a different kind."

The chapter on anæsthesia is scrappy, for it deals chiefly with spinal anæsthesia and with the dangers and emergencies of general anæsthesia. In contradistinction the account of shock and collapse and the methods of meeting or obviating these conditions is excellent. The illustrations are numerous and admirable, and we are certain that this well-printed, carefully arranged volume will prove of great practical value to its purchasers.

LIBRARY TABLE.

Health's Highway. By R. J. MECREDY. London: Yellon, Williams, and Co., Limited. 1909. Pp. 172. Price 3*s.* 6*d.* net.—This is a book written by a layman and an enthusiastic cyclist which preaches the gospel of fresh air and sunlight. Of the value of these two adjuncts to health there is no doubt, but the difficulty is, for most of us, to obtain them. Still, there is no harm in insisting upon their desirability. Mr. Mecredy gives us enviable accounts of camping-out tours and other forms of fresh-air holiday. His remarks upon the use of alcohol and tobacco are sensible in the main, but his story of a cycle accident is rather dragged in from the temperance advocate's point of view. He fell on his left knee during a path race "and the patella was left absolutely bare, as though the flesh had been punched off it. For five or six weeks I was attended by the late Surgeon Wheeler, and he told me afterwards that had it not been that I was practically a teetotaller and in the pink of condition the leg could not have been saved." Surely a flayed patella without the joint being opened is not so very serious. We can imagine other than teetotallers keeping a limb in such circumstances.

The Practical Medicine Series, 1909. Vol. X.: *Nervous and Mental Diseases.* Edited by HUGH T. PATRICK, M.D., and CHARLES L. MIX, M.D. Chicago: The Year Book Publishers; Glasgow: G. Gillies and Co. Pp. 248. Price 5*s.* net.—In this, the tenth, volume of the well-known Practical Medicine Series are to be found abstracts of many important papers on nervous and mental topics that have appeared during the year, coupled with much that is of comparatively little value. It is true that the apparent aim of the editors is to analyse especially those articles that are of diagnostic and therapeutic significance, and we find here in a handy form abstracts of much of the best work of English, Continental, and American authors. But there are grave omissions, even if the volume is to contain only papers of relative importance. Thus not a single contribution from the English neurological journal *Brain* is analysed. The few pages devoted to mental disease are utterly inadequate, and the selections in this department leave much to be desired. On the other hand, some of the synopses are of entirely secondary importance, and the same may be said of some of the photographs illustrating the volume. Seeing that the yearly output of neurological and mental literature is so immense, discrimination is a *sine quâ non* for the success of any analytical compendium of this description.

Where no Man Pursueth: An Everyday Story. By Mrs. BELLOC LOWNDES. London: William Heinemann. 1910. Pp. 352. Price 6*s.*—We must protest against the subtitle of Mrs. Belloc Lowndes's interesting and very clever book. It is not an everyday story at all, but a tremendously sensational drama of the kind that can but rarely happen. The protagonist in this record of a cold-blooded crime is a doctor who commits bigamy, the ulterior object of which felony is to poison the victim of his sham marriage, his real wife consenting in the scheme and collaborating in the attempted murder. Now this is not an everyday story, but a very unusual and extraordinary one, though Mrs. Belloc Lowndes's skill in telling it goes far to persuade us that such things might easily happen. Curiously enough, some fifty years ago one Dr. Smethurst planned much such a crime, and succeeded in murdering the unfortunate woman who thought she was his wife, his real wife, perhaps, abetting; but so far from escaping pursuit the law laid him by the heels at once, and a jury convicted him of a cold-blooded assassination. Smethurst was not hanged, his escape forming a most interesting chapter in forensic medicine,[1] but his experience, at a time when the safeguards against poisoning were much weaker than now, is good ground for the belief that crimes of his sort rarely escape punishment, and cannot be regarded as everyday occurrences. Mrs. Belloc Lowndes has not found in Smethurst's crime the *motif* for her novel; this we happen to know, while in no single detail does her story resemble the tragedy of Miss Bankes's death, but by an interesting coincidence her imagination has hit upon the very complication of bigamy and collusion between the murderer and his true wife which formed the most extraordinary feature in the drama of real life. We recommend "Where No Man Pursueth" to our readers because it is a thoroughly interesting book, and also because the insight into the troubles of the medical life is remarkable. The sketches of the two young doctors, George Glyn, the sound man in whom experience has begotten diffidence, and Peter Whitby, the cocksure and impressionable man, are excellently drawn types of practitioner, and the hideous responsibility which a medical man must take upon himself when he decides to act as though one of his patients were being secretly poisoned is vividly realised. The villain, Dr. Burdmore, we should not have been able to believe in had it not been for the fact that Dr. Edward Pritchard of infamous memory was just such another. We do not intend to say more about the book as, in particular, to disclose the intricacies of the plot might be

[1] THE LANCET, Sept. 10th (p. 268) and 17th (p. 292), 1859.

to spoil it for other readers. All who like a clever sensational novel should get "Where no Man Pursueth," and medical men should know that they will find the medical parts of the book skilfully done.

JOURNALS AND MAGAZINES.

Jahreskurse für Ärztliche Fortbildung. March, 1910. Published by J. F. Lehmann, München. Price 16 marks annually.—This number of the German post-graduate review is one of considerable interest. Professor Fleiner of Heidelberg deals with diseases of the stomach, and after a careful description of the relations of the organ and the methods of clinical examination during life, discusses the problems of digestion and its disorders. The stomach is divided into functionally distinct compartments and this he considers of great importance. In the first place, the region of the lesser curvature may act as a canal leading directly from the œsophagus to the pylorus so that fluids are directed along its course without occupying the fundus. Secondly, the division into a cardiac portion and a pyloric portion which play perfectly distinct physiological rôles is proved by many different observations, and is, of course, permanent. During life and in the upright position of the patient the gastric canal has a J shape which differs somewhat in the two sexes. The long limb of the J is the cardiac part, and the short limb the pyloric. The former serves as a more or less relaxed food reservoir, the contents of which are so arranged that the last swallowed portions lie in the centre of the mass and still remain alkaline, whilst the periphery contains the first received food and is of an acid reaction. The chief active movement in this part of the stomach (apart from vomiting) is a slow diastole which it undergoes on the receipt of food. The pyloric antrum, on the other hand, contracts actively from two to six times a minute, receiving the most fluid portions of the cardiac contents, and passing them on to the duodenum. The regulation of the reflex which opens the pyloric sphincter and its bearing upon pathological processes are discussed at some length. Fluidity of the gastric contents on the one side of the sphincter and alkalinity of the duodenal on the other side appear to be the chief factors in bringing about this relaxation. In regard to motor sufficiency of the stomach, it is considered that, if gastric lavage in the morning produces a clear washing free from food débris of the preceding day, there is efficient motility. The presence of hypersecretion of acid and digestive juices in the stomach is regarded as pointing to the existence of pyloric spasm, which hinders the outflow of the gastric contents and allows an accumulation of secretion. Thus is explained the excess of acid found in cases of ulcer of the pylorus or of the duodenum. Professor Lüthje of Kiel deals with the subject of metabolism and its disorders. He begins with a concise review of the currently accepted theories relating to the normal metabolism of the various foodstuffs. The nature and treatment of diabetes are then discussed. The existence of hyperglycæmia (excess of sugar in the blood) apart from glycosuria and the relation of these two conditions to one another; the relative advantages of various diets in diabetes; the special advantages of oatmeal diet; the desirability of combining a low proteid intake and a diet of low caloric value with the oatmeal feeding; practical suggestions regarding feeding with alternate meals of vegetables and oatmeal are severally considered. For the treatment of threatened acetonuria an oatmeal diet is considered the best, and large doses of alcohol are said to be beneficial. The administration of bicarbonate of soda by the veins or by the rectum is the only possible resource in the coma resulting from acid intoxication. The number is concluded by Professor Erich Meyer of Strassburg with a short review of blood diseases, including a consideration of the circumstances associated with excess of blood, loss of blood, variations in the relative proportion of serum, corpuscles, and hæmoglobin.

School Hygiene: A Monthly Review for Educationists and Doctors.—The first numbers of this magazine have been issued at the modest price of 6*d.* by the School Hygiene Publication Company. Though in the main published in English, it contains an article in German by Professor H. Griesbach, President of the First International Congress on School Hygiene, one in English by Sir Lauder Brunton, President of the Second International Congress on School Hygiene, and one in French by Dr. A. Mathieu, President of the Third International Congress on School Hygiene. These three articles insist on the importance of school hygiene, on the utility of the international congresses held on this subject, and on the necessity of a permanent link to keep up the connexions established by these congresses. The polyglot periodical is intended to voice this view; as Dr. Mathieu remarks, "Ici apparait le bienfait certain de la collaboration internationale." The other contents of the review are thoroughly international. For instance, Mr. C. Edward Wallis, M.R.C.S. Eng., L.D.S., describes the school dental cliniques in Germany. These are not limited to the examination and treatment of decayed teeth, but there is also instruction given to parents at the "Parents' Evenings." Here teachers and parents are gathered together and given lectures and lessons on dental hygiene, so that they may be able to watch the children, and, if necessary, teach them dental drill. An interesting account is given of the measures taken at Schöneberg, near Berlin, to stamp out an epidemic of ringworm. Some 10,000 children were examined and 25 boys and two girls were found to be infected. The old-fashioned treatment of head-shaving and unguents was relied upon, and the class-rooms frequented by the children were disinfected. Teachers and parents after the patient was reported cured kept strict watch for six months in case of recurrence, and the total cost of the measures taken amounted to a little over £900, each patient treated and cured costing about £33. As the sanitätsrat, Dr. Friedemann, remarks, it was a brilliant but expensive victory. Dr. Luther H. Gulick, President of the Playground Extension Committee, New York, deals with athletics for girls from the biological standpoint. He concludes that boys' games, football, cricket, tennis, golf, &c., are all derived from the pursuits and necessities, the hunting and the fighting, by which the primitive man managed to survive. "The ability to run, to strike, to throw, is, on the whole, a masculine ability." He points out that the average boy is stronger than the average girl, except that the girl matures earlier, so that at the beginning of puberty she may surpass the boy of her age in height, weight, and speed. But he suggests that this superiority lasts a very little time, and he holds that the physical exercise and the muscular development of woman must not be conducted on the same lines as those of man. Dr. Gulick maintains that: "So far as the subject has been experimented with, dancing seems to be the form of exercise best adapted to the abilities and needs of girls, and bids fair to take the place in the average girl's education that athletics take in the case of the average boy. Dancing is here used in the large, old sense—the sense in which it was used among the ancient Greeks. The two-step and the waltz do not constitute a leading part of the dancing curriculum."

The Phonographic Record.—The Society of Medical Phonographers was founded in 1894, and its bi-monthly publication has now entered upon the sixteenth volume. The current issue contains, besides the treasurer's report for the year

1909, the continuation of an article by Mr. Norman Porritt on appendicitis and an interesting review of recent continental literature bearing on clinical pathology. A new feature is a student's department edited by Dr. O. C. Gruner. The value of phonography to a medical student or to a practitioner in after-life may be considerable, and we commend the society to the attention of our readers, as we have done on many previous occasions.

New Inventions.

THE "NEBULIQUE" SPRAY.

THE "Nebulique" is the name given to an atomiser or spray which Messrs. C. J. Hewlett and Son, of Charlotte-street, London, E.C., have put on the market, and it appears to us as being one of the best to which our attention has been called. The "Nebulique" produces a fine cloud with either aqueous, spirituous, or oily solutions, and has the decided advantage when required of spraying with only a few drops of liquid. It is suitable for laryngeal, pharyngeal, or nasal purposes, and there are no moveable parts to get out of order. As the illustration may perhaps convey, the spray, with the exception of the lower part, the rubber ball, is made entirely of glass, and thus liquids never come in contact with the rubber. For the sick room the spray will be found to diffuse disinfectants with a good volume, and the apparatus can be removed from the rubber ball and be quickly and easily sterilised by boiling or otherwise. Not the least desirable feature of the "Nebulique" is that it can be obtained for the moderate price of 3*s*.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on Thursday, April 28th, Sir THOMAS BARLOW, Bart., K.C.V.O., the President, being in the chair.

The following gentlemen having passed the required examination were admitted Members of the College: David Henriques de Souza, M.D. Lond., L.R.C.P., Thomas Renton Elliott, M.D. Camb., David Barty King, M.D. Edin., Henry Fairley Marris, L.R.C.P., Geoffrey Eugene Oates, M.B. Lond., Sydney Arthur Owen, M.B. Camb., L.R.C.P., William Trethowan Rowe, M.D. Lond., L.R.C.P., Reginald Vaughan Solly, M.D. Lond., L.R.C.P., and Rawdon Augustus Veale, M.B. Lond., L.R.C.P.

Licences to practise physic were granted to 90 gentlemen who had passed the required examinations.

The following Members were elected Fellows of the College: Otto Jackson Kauffmann, M.D. Lond., Charles Hubert Roberts, M.D. Lond., Edward Arthur Saunders, M.B. Oxf., Francis Edward Fremantle, M.B. Oxf., Robert Dawson Rudolph, M.D. Edin., Lewis Albert Smith, M.D. Lond., Frederick Craven Moore, M.D. Vict., John Charlton Briscoe, M.D. Lond., David Forsyth, M.D. Lond., William Henry Willcox, M.D. Lond., Arthur Frederick Hertz, M.D. Oxf., and Conrad Meredyth Hinds Howell, M.D. Oxf.

A communication was received from the clerk to the trustees of the London Parochial Charities, dated April 7th, concerning the appointment on new terms of a representative of the College upon the committee of management of the Chelsea Physic Garden.

The following motion was proposed by the Senior Censor (Sir WILLIAM ALLCHIN) and seconded by the Emeritus Registrar (Dr. E. LIVEING):—

That the altered scheme of the Charity Commissioners in respect to the Chelsea Physic Garden be approved and its provisions given effect to so far as they relate to this College.

The effect of the new arrangement is that the College has now a separate representative on the committee of management of the Chelsea Physic Garden instead of having one alternately with the Society of Apothecaries.

A communication was received from the Secretary of the Royal College of Surgeons of England reporting proceedings of the Council on April 14th.

On the motion of the Senior Censor (Sir WILLIAM ALLCHIN), seconded by Professor W. OSLER, Dr. Norman Moore was elected Harveian librarian in the place of Dr. J. F. Payne, who had resigned.

Dr. MOORE thanked the College for the honour thus afforded him.

The quarterly report of the College Finance Committee was received and adopted.

A report from the Committee of Management, dated March 22nd, was received and adopted. The report was as follows:—

1. The Committee of Management have considered the recommendations of the General Medical Council which were referred to them by the Royal Colleges, and particularly that recommendation which relates to a compulsory interval of two years between the Second and the Final Examinations. The committee beg to point out that the regulations of the Conjoint Board have, since the establishment of the Conjoint Scheme, required an interval of two years between these examinations, but that in the regulations the two years have been interpreted to mean two winter and two summer sessions. In view of the recommendation of the General Medical Council, the Committee of Management now recommend that the regulation be altered so as to require an interval of 24 months between the two examinations.

2. The committee also recommend that the Bedford College for Women, which has been visited by a member of the committee, be added to the list of institutions recognised by the Board for instruction in chemistry, physics, and biology.

Books and other publications presented to the library during the past quarter were received and thanks returned to the donors.

After some further formal business, the PRESIDENT dissolved the Comitia.

Looking Back.

FROM

THE LANCET, *SATURDAY*, May 5th, 1832.

SYDENHAM says, that one half of the diseases of females are dependent upon hysteria. There is no disease in which you will meet with more imposition than in this, and that too in cases where the patient's rank in life, her station, and education, would all lead you to believe such imposition on her part to be quite impossible. Females will sometimes insist upon it that they have a disease. I once heard of a case in which a young lady was said not to have passed a drop of urine for six weeks. She had diuretics and every other stimulant to the urinary organs, but all to no purpose. Her medical man now began to suspect the case was all trick; she was narrowly watched, and it was discovered that she *drank her urine*. I was once shown a very large quantity of gravel which a young lady passed with her urine. It was reported to me that she had violent pains in the back and loins. She had gone through the whole list of medicines usually prescribed for these cases, and by way of doing something, she had been sent to the seaside. Now I do assure you, that the gravel which was shown me was nothing more than sea-sand. The above are cases of downright imposition, and in all such cases as *these*, I would advise you to let the patient and her friends know that you are fully aware that her disease is all imposture, and you will generally find this remark sufficient to cure the worst symptoms. (Excerpt from Clinical Lecture, delivered April 10th, 1832, at St. George's Hospital by Dr. Seymour, on Hysteria.)

UNIVERSITY OF LONDON: UNIVERSITY COLLEGE.—A course of eight lectures on the Chief Animal and Vegetable Pigments will be delivered in the Physiological Institute on Fridays during May and June, commencing on Friday, May 6th, by Dr. S. B. Schryver. The lectures will deal chiefly with the more recent investigations on chlorophyll and with the blood pigments. The urinary pigments and the less important animal and vegetable pigments will also be considered if time permits. These lectures are open to all students of the University, and also to all qualified medical men and other persons who are specially admitted.

THE LANCET.

LONDON: SATURDAY, MAY 7, 1910.

Foreign Bodies in the Bronchi.

WITH the rapid progress in the surgery of the present day the methods of treatment of one decade may become utterly obsolete and even unjustifiable in the next. And we are so accustomed to the advances which are being made that we hardly appreciate at their full value the extraordinary improvements which occur with increasing frequency nowadays. In the present number of THE LANCET we print an account of a case under the care of Dr. STCLAIR THOMSON which affords a striking instance of the success which followed the treatment by the latest method of one of the most serious conditions known to surgery. All who have devoted attention to the surgery of the chest know the difficulty and the extreme danger attending attempts to remove from the bronchi and their branches foreign bodies which have found their way into them. In fact, it is difficult to say whether it is more dangerous to leave *in situ* a foreign body which has fallen into one of the bronchi or to attempt its removal by a cutting operation through the chest wall. If the foreign body is left within the lungs it will sooner or later with almost absolute certainty give rise to severe inflammatory processes. Sometimes an acute pneumonia arises within a few days or even within a few hours. Sometimes weeks or months may elapse before the inflammation begins, but sooner or later some inflammatory process will ensue, and will almost certainly lead to a fatal issue. If an attempt be made to remove the foreign body by a cutting operation through the chest wall the risks are indeed great. The difficulty of finding the body is very real, and the danger of injury to the thoracic contents is considerable, so that surgeons were until recently somewhat averse from undertaking so unsatisfactory an operation. Rarely, very rarely indeed, it may happen that the foreign body finds its way out by the route along which it entered, but the chance of this lucky termination of a serious condition is so small that it would be criminal to trust to it.

A few years ago Professor GUSTAV KILLIAN of Freiburg University conceived the idea of examining the bifurcation of the trachea and its main branches by the aid of direct vision, and for this purpose he devised an instrument which he called a bronchoscope and which he introduced into the air passages through an opening in the trachea. The results of this method were so satisfactory that in the country of its origin it soon achieved no small degree of popularity, and was, in fact, widely employed. By means of this tube it was possible to see even as far as the first bifurcation of each bronchus and minor operations could be performed on them, such as the removal of small growths and foreign bodies. But the operation had the manifest disadvantage that it needed a tracheotomy wound which had to heal later. KILLIAN then proceeded to modify the instrument so that it might be used through the mouth and larynx without requiring the performance of the tracheotomy. In this attempt he succeeded, for it was found that when the head was thrown back a straight instrument could pass through the mouth and down the trachea, and in the same way an instrument could be introduced into the œsophagus. The illustrative plate accompanying Dr. STCLAIR THOMSON'S vivid account of the successful use of the instrument explains the mechanism clearly. The passage of the instrument into the œsophagus is no innovation, for its possibility had been, of course, known for many years to professional sword swallowers who are able to pass the blunted blade of genuinely unjointed swords no little distance down the gullet. MORELL MACKENZIE, MIKULICZ, V. SCHRÖTTER, STORK, KIRSTEIN, and others persevered in their efforts to inspect the divisions of the air-tracts, and to pass an instrument intelligently guided by sight along it, but success had to await the employment of cocaine, development in electric illumination, and the discovery of the X rays.

More recently the facilities for viewing the trachea and bronchi have been greatly enlarged by the ingenuity of several laryngologists, the instrument now usually employed being that devised by Dr. BRÜNING of the Laryngological Clinic, Freiburg University. This article, which has been fully described in our columns by Mr. HERBERT TILLEY,[1] consists essentially of a long tube sufficiently small to pass between the vocal cords and long enough to extend from the teeth to the division of the bronchi. By means of a prism a light from a small electric lamp is thrown down the tube and the surgeon is able to see directly the structures which are at the end of the tube. Forceps, probes, and other similar instruments can be passed down the tube so that objects may be seized or otherwise dealt with as they lie at the lower end of the tube. For manipulations such as these anæsthesia is obviously necessary; sometimes local cocainisation suffices, but for the more delicate operations it may be necessary that the patient should be under the influence of a general anæsthetic, preferably chloroform. And even when the patient is chloroformed it is desirable that cocaine should also be applied directly to the mucous membrane of the air-passages so as to abolish sensitiveness and prevent undesirable reflex actions. Every credit must be given to Professor KILLIAN for perfecting a method which is now available for the diagnosis and treatment of many conditions which were until recently beyond intelligent therapeutics, and we hope soon to record cases of its employment in much larger numbers, for undoubtedly what can be done in this direction is not appreciated in this country. We believe that already in 1907 Professor KILLIAN had collected the records of 164 cases in which a foreign body had been removed from a bronchus by the direct method and the patients saved from almost certain death. A great number of these cases were reported from Freiburg, and we cannot think that the inhabitants of South Germany are more given to inhaling

[1] THE LANCET, 1908, vol. ii., p. 1359.

foreign bodies than other people. We can only conclude that the practitioners of Freiburg and its neighbourhood, realising the value of direct bronchoscopy, are more prompt in availing themselves of its advantages for their patients.

We may repeat the salient points of the case which has given rise to these remarks, though Dr. STCLAIR THOMSON'S account hardly needs emphasising. A lady was holding a pin between her lips when something caused her to laugh and the pin disappeared. When no symptoms arose it was imagined that the pin had slipped into the œsophagus, but before long she felt that it was within her air passages, while movement increased the definiteness of this sensation. She was brought to London with all speed and an X ray examination by Mr. A. D. REID showed the pin lying head downwards below and internal to the right nipple. The patient was anæsthetised with chloroform and a 20 per cent. solution of cocaine was applied to the pharynx, larynx, and trachea down to its bifurcation. Dr. STCLAIR THOMSON then passed the Brüning's tube, and after a little search the sharp point of the pin was seen projecting from the opening of a branch bronchus, when by means of forceps it was seized and removed. The time occupied from the commencement of the administration of chloroform to the final removal of the pin was only 20 minutes. From the situation in which the pin was found it may be laid down as practically certain that it could never have been expelled spontaneously, and no reasonable doubt can be felt that within a short time severe pulmonary complications followed by death would have ensued. Such a result may well be called a surgical triumph. At once simple, speedy, and safe, the operation offers a marvellous contrast to the older methods of removal through the chest wall. The procedure sounds extremely simple, but the care and skill required are very great, and the case forms another example of a fact which is becoming steadily more evident, that there are certain methods of treatment which can only be safely and efficiently carried out by those who have the opportunity of acquiring special skill by special practice. Every general hospital should be provided with the latest instrumentarium necessary for the practice of these direct methods of exploring the food and air passages, and the laryngologist who is expert in using them will be the first person summoned when emergencies of this sort reach the hospital.

Malaria in the City of Bombay.

ALTHOUGH the parasite of malaria was first discovered by LAVERAN in 1880 it was not until ten years later that the theory of its transmission by means of the mosquito was established. Since that time measures based on this principle have been carried out in various parts of the world, but Bombay claims the distinction of having been the first city of any great size or importance to attempt to combat malaria by modern methods. In a report[1] recently issued by Dr. J. A. TURNER, the executive health officer for the municipality, an account is given of what has been done in Bombay during the past eight years, 1901 to 1909, respecting the fight against malaria. The disease has existed in the city for many years, the local conditions being entirely in favour of fostering the malady. Many of the poorer inhabitants are malarial subjects capable of spreading the infection, and annually some thousands of poor people from other malaria-infected districts in India flock to Bombay. The city abounds in open wells, cisterns, tanks, stagnant pools overgrown with rank vegetation, and other places where myriads of mosquitoes are constantly multiplying. The population of the municipality is large; the census of 1906 showed the people to number nearly a million. During the eight years in which Dr. TURNER has been struggling to reduce malaria Bombay has been devastated by a continued prevalence of bubonic plague which has carried off more than 103,000 persons in that period. Added to this there have been a times sharp outbreaks of small-pox and cholera requiring the attention of the health department and diverting the services of the staff away from malaria. Above all, it must be remembered that the campaign against malaria was carried out among a native population deeply prejudiced by their religion and customs against the measures urged upon them by the foreigner, even although these measures were framed for the protection of the native against disease and death.

In such circumstances the difficulty of the task was enough to discourage the most undaunted enthusiast. But it is greatly to Dr. TURNER'S credit that in spite of all adverse conditions he steadily persevered in carrying out his antimalarial campaign. The line he took was mainly in the direction of improving local insanitary conditions—draining, levelling, and filling in hollow ground in which water was likely to collect, cleaning out wells and tanks, and endeavouring to get them all covered in, the waging a war of extermination against mosquitoes, and urging the prophylactic use of quinine upon the people. It is not possible, even after eight years, to measure by statistics the amount of success which has been achieved. It has to be remembered that an attack of malaria is not, in most instances, immediately fatal, but that an immense amount of misery and suffering results from it, since it causes rather a chronic condition of bad health which interferes with the victim earning his daily bread, and which often renders him liable to fall an easy prey to intercurrent disease. The corporation of Bombay has not been unmindful of its serious responsibilities regarding this disease. In 1901 certain of its members were deputed to consider the measures necessary for preventing malaria in the city with the assistance of their executive health officer, and in 1905 the council petitioned Government to inquire into the prevalence and causation of malarial and other fevers in Bombay. This investigation was carried out by members of the Government medical and sanitary services, entomological experts, and other competent representatives, who issued a report in 1908, about the time that a wave of epidemic malaria was sweeping over India and extending to Bombay. Early in 1909 a committee was formed by a number of important public bodies in the city, including the corporation, to further investigate the increased prevalence of malaria, and to this committee an expert in malaria was attached, namely, Captain A. G. MCKENDRICK, I.M.S., who, however, was shortly afterwards recalled, and his

[1] Report on Malaria in Bombay from 1901 to 1909. By J. A. Turner, M.B. Edin., D.P.H. Cantab., executive health officer.

place was taken by Dr. CHARLES A. BENTLEY. This expert submitted a detailed report in the autumn of last year. He pointed out that the species of anopheles which served to transmit malaria in Bombay was the Nyssorynchus Stephensi, which breeds readily in wells, cisterns, tanks, tubs, or, indeed, in any water receptacle whatsoever, natural or artificial; whereas in many other places the mosquitoes breed only in natural collections of water, such as streams, ponds, ditches, and puddles. Dr. BENTLEY also pointed out that certain species of culex known to transmit filarial disease were found in Bombay, and also the Stegomyia calopus, which in the western hemisphere is known to spread yellow fever. He formed the opinion that with a proper staff and organisation, adequate powers, and sufficient expenditure, it would be possible to control malaria within definite limits through a systematic mosquito destruction, and for this purpose he advised the creation of a special department working under the control of the executive health officer. He also recommended that if any well was found to be serving as a breeding-place for mosquitoes it should be declared a "dangerous nuisance," and that if any house which had a well in which mosquitoes breed the dwelling should be declared "unfit for habitation."

Dr. BENTLEY'S report may be said generally to support the recommendations made by Dr. TURNER to the corporation, the only point of difference apparently being whether, on the one hand, a special department should be created or, on the other, the health department should continue to carry on the antimalarial campaign. Dr. TURNER'S contention is that until the island on which Bombay stands is converted into a waterless, well-less, and perfectly drained and reclaimed condition, nothing will prevent the breeding of mosquitoes. There seems to be some force in his argument that while carrying out antimalarial measures the health department will be improving the sanitation of the city, and that if his staff were augmented it would be possible to deal more energetically and systematically with the insanitary conditions which are discovered. On the whole, we are disposed to agree with Dr. TURNER that the health department, increased in the number of its staff and supplied with the necessary funds, will be able best to carry on the campaign against malaria as a part of its general duty in improving the local conditions in Bombay. It appears to us that Dr. TURNER deserves great credit for his courageous struggle with malaria during the past eight years, under conditions of serious difficulty, which would have been sufficient to dishearten the majority of men.

Medicine in Fiction.

THE favourable review in another column of a novel founded upon a case of poisoning suggests to us a few remarks upon the position of medicine in fiction, a subject which has been frequently treated in the medical press, in our columns and elsewhere, but almost invariably from one point of view—the view of ridicule. It seems clear from several modern novels that this attitude, if assumed too readily, may easily become unfair, for a considerable number of works of fiction, both in English and in French, have dealt recently with medical problems in an accurate and intelligent manner. The importance of this lies in the proof which is so furnished of the increasing familiarity of the public with the problems of medicine, a familiarity that is displayed by the writers and appreciated by the readers. We have, in fact, here distinct evidence that the public is becoming more alive to the intimate manner in which medicine in its different branches must enter into social life, and the more widely this fact is recognised the better it will be for the medical profession in all its sections.

Most of the criticism which has been passed upon the medicine of the sensational novel has been well deserved, but not sufficient account has, perhaps, been taken of the manner in which the element of medicine is usually employed in the manufacture of the plot of these works. Where the terrible accident, the devastating epidemic, or the hideous poisoning is introduced into the story merely to help the story along, being used as a method of removing superfluous persons, as a background upon which heroic virtue may shine, or to furnish an opportunity for displaying the acumen of the officers of justice—in each or all of these situations it cannot matter much whether the medicine is accurate or no. The public is not seriously deceived by incorrect pathology in such connexions because it is so palpable that the medicine has been moulded to fit the story; and it must be admitted that frequently such adaptation of scientific verity to the exigencies of the drama may lead to a good story, where a rigid use of only the accepted teachings would have ruined the plot. Where medicine is used in this subsidiary or auxiliary manner no great harm can come of absurd statements or deductions—in every other walk of life the sensational novelist takes liberties with the truth. But, it seems to us, inaccurate medicine in fiction may do a great deal of harm where the conditions of the medical life, or questions of medical ethics, or matters of hospital administration, and so on, are wrongfully treated; and there have been several notable examples of this in books which may be forgotten now but which had a vogue not so long ago. Here the false statements made and false impressions created did real mischief, and similar attempts to tell from outside what cannot be guessed from outside will continue to do mischief. The authors deal with circumstances that are supposed to be within the public ken, and with matters on which the public has a right to have a critical opinion, but do not supply accurate information for the construction of a public judgment. Nobody really minds whether a particular villain commits his crime with arsenic or strychnine, or whether the evidence massed against him by the sleuth-hounds of the law is in accordance with the medico-forensic facts. The essential thing is that the crime should be done so that there may be a situation to develop, and that the villain should be identified and traced down. The interest in works of this sort lies in the horror of the action, in the subtlety of the murderer, and in the acumen of the detective, and not a whit in the dosage of the poison; and the story would have the same moral whether the toxicology were right or wrong. The general public feels that the chemistry can only be appreciated by those having expert knowledge, while those possessed of such knowledge are not likely to allow it to be unsettled by any inaccuracies on the part of a novelist. For practical purposes the untrue is here as good as the true. But when we are asked in a

novel to consider the place of medical men in the social scheme, the behaviour of medical men towards their patients, the administration of hospitals and sanatoriums, and so on, the position is totally different. The public is rightly interested in the details of such matters, quite apart from the general scheme of any story in which they may find a place, and the greatest possible damage may be done by inaccuracy.

The question of whether medical episodes and medical scenes are fit subjects for fiction can only be answered in one way. They are. Medicine is closely interwoven with the substance of modern life, and clearly falls within the province of those writers who essay to describe life. Medicine has nothing to lose but everything to gain from those writers who can show how intimately its teachings must influence every sort of social and political development. But where medicine is treated in this manner it is necessary that the writer should be both well informed and conscientious. Moreover, in the light of works which have been recently published by certain London firms, it would appear necessary that the authors should have a higher ideal of decency than sometimes prevails, and a more lively appreciation of the incalculable mischief that can be done by the pornographic work. We do not profess here to discuss in the least how far sex problems can be, and how far they cannot be, dealt with in popular fiction; but of this we are certain—sexual perversion is a pathological subject, and finds its only fit place in pathological treatises. Of course, several of the greatest romancers the world has seen have introduced this subject in different phases into their works. Suppose we pardon these great ones on the ground that their intellect was such as to demand unfettered scope, we may at least ask modern writers to prove that they stand on the same plane as BALZAC before they take the licence of BALZAC.

Annotations.

"Ne quid nimis."

THE CHEMICAL ANALYSIS OF COAL-TAR DISINFECTANTS.

INQUIRIES have reached us as to the exact manipulative details employed in our laboratory in the chemical analysis of coal-tar disinfectants. In reply we may state that the following procedure has been found to give accurate and consistent results. 10 grammes of the coal-tar disinfectant are weighed out and thoroughly shaken or emulsified with 90 cubic centimetres of water. 100 cubic centimetres of a hot saturated solution of baryta are placed in a conical flask of about 300 cubic centimetres capacity, provided with a well-fitting cork. The diluted disinfectant is added gradually about 5 cubic centimetres at a time to the hot baryta solution, the fluid being whirled round vigorously after each addition. When the whole of the disinfectant has been added to the baryta solution the mixture is poured on to a wet filter, is filtered, and the residue washed. The filtrate should occupy a volume of about 300 cubic centimetres. One-half of this volume is placed in a separating cylinder and made acid with hydrochloric acid, which liberates the phenols. The barium chloride solution resulting serves to render the phenols insoluble. 20 cubic centimetres of ether are then added and the mixture thoroughly shaken. The ether is tapped off and placed in a small weighed flask beaker. A further extraction is made with another 20 cubic centimetres of ether which is added to the first extraction. The flask is placed on top of the hot air oven and kept at a temperature of 100° F., and a glass tube connected with the water-pump is suspended just over the surface of the ether. Evaporation is allowed to proceed until the residue just smells of ether, and then the flask is placed on its side in a desiccator over a tray of anhydrous calcium chloride. After a quarter of an hour the flask and its contents are weighed. The weight of phenols or phenoloids multiplied by 2 and by 10 gives the percentage of phenols present in the disinfecting fluid. Next the residue—i.e., the extracted phenols—is dissolved in caustic soda, and the solution is made up with water to 100 cubic centimetres. 5 cubic centimetres of this solution are placed in a 50 cubic centimetres cylinder, about 20 cubic centimetres of water are added, and the mixture is then strongly acidified with hydrochloric acid. A standard solution of bromine in caustic soda is then run in until a permanent yellow colour is produced. The strength of the alkaline bromine solution must be controlled by potassium iodide and decinormal solution of sodium thiosulphate. A convenient strength is a fifth normal solution 1 cubic centimetre = 0·016 Br. The number of cubic centimetres of bromine solution run in to produce the permanent yellow colouration, multiplied by 0·016, by 0·195, by 20, and by 2, gives the bromine value in terms of pure carbolic acid of the percentage of phenols present. The above bromine method avoids adding a large excess of bromine to the phenol, which leads to erroneous results when easily oxidisable phenoloids are present. When pure carbolic acid is present an excess of bromine is immaterial. The process just described can be applied to those disinfectants emulsified with soaps and resins. In the case of emulsions made with gelatin or dextrin the use of baryta is unnecessary, the gelatin or dextrin being first separated by means of alcohol or acetone, as described in THE LANCET report. Experiments made since the publication of THE LANCET Commission on Disinfectants continue to bring out a remarkably definite relationship between the carbolic acid bromine figure and the actual germicidal carbolic coefficient determined by the bacteriological procedure described. As examples may be quoted the following:—Disinfectant A: THE LANCET coefficient, 2·4; coefficient according to $\frac{P-B}{3} = 2·7$.

Disinfectant B: THE LANCET coefficient, 7·7; $\frac{P-B}{3} = 7·7$.

Disinfectant C: THE LANCET coefficient, 6·40; $\frac{P-B}{3} = 6·46$.

P = the percentage weight of phenoloids and B the percentage of phenoloids calculated as pure carbolic acid according to the bromine absorbed. It may be added that preparations have been examined which have yielded 75 per cent. of phenoloids by this process.

THE ARCTIC TEMPER.

UNDER this heading Dr. H. G. Blessing has recently published extracts from his diary of the Nansen Polar Expedition in the "nineties." The onset of this condition seems to be slow but sure; in the first Arctic winter it is unnoticeable, in the second winter it becomes troublesome, and in the third winter it has developed into a pall which clings like a mist about its victims and crushes the spirit of nearly all. The cause of this condition is to be found in the darkness, the monotony of the life, and the complete isolation of the explorers from every sign of life and motion; the mind, in fact, is robbed of every external stimulus, and is slowly starved by this

want. Very troublesome is the extreme irritability of the victims of this condition; the most absurd trifle may raise a veritable storm of rage, and caustic speeches evoke yet more caustic retorts, till the atmosphere is ominously charged. In no other surroundings does the beam in one's own eye become so microscopic, and the mote in one's brother's eye so obvious as in these circumstances, and only in the silent watches of the night does the consciousness of personal failings return and restore the mental equilibrium necessary for an impartial judgment of the failings of others. Even these short periods of impartial self-examination are naturally wanting in those in whom self-consciousness is a congenital defect. As with husband and wife who have long lived together, every thought, every fault, every trick of manner or speech become known to all who are sharing in a Polar expedition, everyone's views on every subject under the sun are common property. Under no other conditions is the truth of the old adage, "There is nothing new under the sun," so forcibly driven home as in the third winter of an Arctic expedition. While the expedition is still in contact with land, or when active progress is made towards a definite aim, all goes well, but when the ship is frozen in, and the only sense of motion is limited to the observation of a line passed through a hole in the ice to indicate the course of the current, the strain begins. Dr. Blessing's prophylactic measures are constant employment and a strict limitation of the association of the officers with the crew. "Birds of a feather flock together," and the democratic infraction of this rule leads not only to loss of discipline but also to discomfort on both sides. For work to be sufficiently varied more room must be given than was available on the *Fram* in 1893, when the maker of a pair of ski had to work in a temperature of −20°. Bookbinding, painting, carving, plaiting, leather work, and carpentering are all useful adjuncts in the wise employment of time, and the forethought of friends which provides presents and surprise packets to mark not only the first but also the later festive seasons in the coming years will be amply repaid by the gratitude of the recipients.

THE TELEPHONE AS AN AID TO DIAGNOSIS.

AT a meeting of the Institution of Electrical Engineers Mr. S. G. Brown has read a very interesting paper on "A Telephone Relay." Primarily Mr. Brown's interest in the subject was the production of a clear and loud-speaking transmitter, to magnify the sounds produced in the ordinary telephone, and thus to render telephony at great distances a practical matter. Eventually he has designed a remarkable accessory to the telephone which incidentally may prove to be a valuable adjunct to the diagnostician. The electric stethoscope in its present form causes the sound of the heart to be three times as loud as in the ordinary stethoscope. If, however, the telephone relay invented by Mr. Brown is attached, the two instruments combined raise the intensity of the sound some 20 times and more. The instrument was tested in a number of diseased heart cases and it appeared to render diagnosis particularly easy and revealed some phenomena only previously suspected. When the instrument was applied directly to the heart the sound of the beats given out in the telephones was uncomfortably loud and easily heard by the patient and all those standing round, and this even when the telephones were in position on the head of the operator. The stethoscope as used increased the heart beats to the almost complete exclusion of the shriller or breathing sounds. The instrument can be so tuned, however, that nothing but the breathing sounds were audible. The passage of the air through the lungs was heard as "the roar of wind through a forest of trees." Replacing the telephone head-piece by a transformer the stethoscope was joined to the ordinary telephone service, and for the sake of experiment the sound of the heart has been transmitted over several miles of telephone line to medical men in various parts of London. The sounds received were as loud and clear, it is stated, as when heard locally. It is suggested that it is now possible for the physician, say, in London, to examine a patient, say, in the country, stethoscopically, and to arrive at a correct diagnosis. The instrument may obviously become of distinct service to the deaf, and the ordinary telephone sounds can by its means be projected into a room so that everyone present can hear. A public performance may thus be reproduced in the hearing of a company of persons present in a room remote from the actual scene.

THE HISTORY OF SQUILL.

IN a recent number of the *Pharmaceutical Journal* Dr. J. Gordon Sharp gave an interesting account of the history of squill. Epimenides, the Cretan poet who lived about 600 B.C., wrote about squill and esteemed it highly. Withering was of the opinion that the name was derived from the Greek verb, *skullo*, meaning to flay, or metaphorically, to trouble, in allusion to the irritating effect of the fresh drug on the skin and mucous surfaces. Steinheil described and named the plant in 1834, while he was living among the Algerian tribe Ben Urgin, and in honour of them he gave it the generic name Urginea. Squill is one of the drugs mentioned in the Ebers papyrus (1550 B.C.). It was well known to the ancient Chinese, Indians, and Arabs, and the latter people made a vinegar and oxymel of squill. Hippocrates (460 B.C.) used it as a detergent for ulcers, and for empyema he prescribed an electuary of which squill was a constituent. He used the entire bulb as a pessary in diseases of women. Pythagoras (about 580 B.C.), a pupil of Epimenides, was so enamoured of the properties of squill that he wrote a treatise on it, and he is credited with the invention of vinegar of squill, while he certainly introduced the oxymel or sweet vinegar of squill into Greece from Egypt. The drug was held by the early philosophers to be "alexipharmic"—that is, antidotal. Pliny (27–79 A.D.) gave an accurate and comprehensive description of the drug, which he valued in "dropsy" and "asthma." He recommended the vinegar for sharpening the eyesight and for expelling tapeworm and other intestinal worms. When boiled he gave the drug as a diuretic, and the chewing of the drug was thought to be good for the teeth and gums. It was also given in affections of the spleen and stomach and in inveterate cough accompanied with asthma. Later, Paulus Æginata (690 A.D.), the last of the great Greek medical writers, dealt with the anthelmintic and other properties of the drug, which at that time had an established reputation as an expectorant and diuretic. In course of time, however, squill fell under suspicion among the leaders of medicine, probably owing to the sickness and vomiting that follow its use. Francis Home (1719–1813), who was professor of materia medica in the University of Edinburgh, was the first to show that squill has an action on the heart. He observed the pulse to be remarkably slow after the administration of large doses of the drug, on one occasion the rate falling to 40. About this time squill became recognised again as a valuable drug, as it was found that in order to produce a diuretic action it was not necessary to produce nausea. Cullen (1789) wrote that the combination of squill with an opiate prevented the emetic and purgative action of the drug, and suggested that the diuretic action might be assisted by the addition of a mercurial preparation. It is interesting to note that squill was administered to the celebrated Dr. Samuel Johnson in one of his later illnesses, and

the efficacy of the medicine may be judged from the following extract from the writings of Murphy, the editor of Johnson's works: "The medicines prescribed were so efficacious that in a few days Johnson, while he was offering up his prayers, was suddenly obliged to rise, and in the course of the day discharged 20 pints of water." It should be added that in Johnson's day the pint was equal to only 12 ounces. In 1785 Withering introduced digitalis to the notice of the profession, and squill gradually lost the first place as a diuretic in cardiac affections. Pereira (1850) came near the truth when he wrote: "Considered with reference to its diuretic effect, squill is comparable to digitalis. But it exceeds the latter in its stimulant influence over the urinary organs." It was not until 1879, when Merck isolated the glucosides contained in squill, that our knowledge of its pharmacology was placed on a scientific basis. Even yet the action of the drug on the heart is too often forgotten in writing prescriptions into which it enters.

IMPURITIES (?) IN TEA.

A CORRESPONDENT writes to us on the subject of tea-drinking. The abuse of tea, he says, is well known to give rise to unpleasant symptoms and to produce sundry complaints. He suggests that much of the tea sold is impure, and grounds his suggestion upon the following observations. Some time ago he had occasion for a large quantity of infusion of tea, and for this purpose he used a number of samples of well-known brands from various vendors. In every instance, after a period of from one to three hours, the infusion became turbid with a sediment at the bottom of the vessel. "In plain English," he continues, "this means that the tea we drink is adulterated or dyed with some substance." We fear that our correspondent is drawing a conclusion from insufficient premisses. Infusions of all teas will become turbid on standing and cooling at various intervals of time. Indian teas become more turbid, and that after a shorter interval, than do teas from China. The cause of the turbidity is the tannin forming a precipitate with the alkaloid, or if very hard water be used with lime in addition. In former days Prussian blue was used for colouring green tea, but the practice, we believe, has almost entirely ceased, and, in our opinion, tea nowadays is one of the least adulterated or "faked" foodstuffs on the market. Moreover, it is subject to careful examination at the port of entry by Custom House experts. Even an infusion of very high-class China teas will show a turbidity after standing two or three days, but this is not due to any impurity or dye any more than is the heavy precipitate which will come down within an hour or so in an infusion of Indian tea. Our correspondent is anxious to hear the experiences of medical men as to the results of their observations on the subject, but we shall be surprised to learn that there is any evidence to support the idea of the widespread adulteration of tea being possible.

OPERATION FOR RIGID DILATATION OF THE THORAX.

IN another column we publish the report of an interesting discussion on Operation for Narrowing and Rigid Dilatation of the Thorax which took place at the German Surgical Congress recently held in Berlin. It was fortunate that Professor Freund was able to open it, since his views on the premature ossification of the costal cartilages are well known. He has previously shown that a hyperplasis with premature ossification of the cartilages brings about a state of rigid dilatation of the thorax. In his remarks he said that narrowing of the upper aperture of the thorax was caused by a defective development of the cartilage of the first rib; this might lead to a derangement of the function of the apex of the lung and thus bring about a favourable soil for the tubercle bacillus. He believed that narrowing might be relieved by resection of a piece of the first rib. He also referred to the emphysematous state of the lung which followed rigid dilatation of the thorax, in which, for purposes of relief, pieces of the second to the fifth costal cartilages might be removed. Subsequent speakers confirmed the benefits from the above operations. Dr. von den Velden reported ten cases of operation for rigid dilatation of the thorax; the post-mortem examinations of patients who had succumbed to intercurrent diseases showed that the gap became closed by a bridge of connective tissue which remained elastic. Dr. Hirschfeld (Frankfort) reported a remarkable case in which he had resected the cartilages in a girl suffering from attacks of bronchial asthma, and when this operation had proved insufficient he had performed resection of the manubrium sterni, which had been followed by complete recovery. The discussion was a valuable one as indicating the experience of surgeons who had performed the various operations and that good permanent results had been obtained. With further trials the true value of the procedures will be placed on a firmer footing, but the operation seem to hold out hopeful chances in cases which are most difficult or perhaps impossible to relieve by other measures.

THE MYSTERY OF MARGATE AIR.

THE study of the therapeutics of climate is a difficult one, and we can only speak in broad terms as to why a given place is suitable for various cases. Why, for instance, is one place bracing and another relaxing? There is no exact scientific answer, but the evidence of experience readily establishes one or the other qualification, as the case may be. The layman knows perfectly well the difference between a district a stay in which soon gives him a feeling of well-being, an energetic temperament, a sense of restored health and vigour, and one in which his indisposition to rouse himself becomes worse, where he soon feels tired and where his mental and bodily fatigue finds no relief. For different cases, of course, both places may have their advantages. The explanation of the difference as to whether a place is tonic or stimulating (bracing) or soothing and sedative (relaxing) rests probably more upon physical than upon chemical facts. The late Sir James Paget once wrote of Margate: "No one can tell what it is in the air of Margate, but practical experience has proved that none better can be found." Enthusiasts say that, as appears to be the case on the veldt, the aerial environment of Margate is aseptic, so that wounds readily heal and surgical cases rapidly mend; it is certain that some pathological conditions, especially in children, are most remarkably improved by sojourn in Margate. It is interesting, therefore, to inquire what it is that confers upon the air of Margate these valuable properties. The chemistry of the air can show but trifling differences from the sea air of other places, its bacteriology is most probably negative as regards septic organisms, while, of course, its physics will be profoundly affected by the great expanse of ocean which practically surrounds the Isle of Thanet. The climate is dry, there is little vegetation in the immediate vicinity, the subsoil is chalk, and, in the words of the medical officer, Mr. Bertram Thornton, "it is not improbable that the large area of foreshore, with its sand and seaweed-covered rocks, may also materially add to the salubrity of the air when the wind sets in from the sea." So far, however, this salubrity has defied analysis, and we still await a scientific explanation of factors which are known to exist, but which we cannot as yet interpret in exact terms. The subject has suggested itself to us by the unanimous testimony given in favour of the air of Margate at the recent annual dinner of the Margate Chamber of Commerce, when the speakers included some well-known writers and

members of our own profession. A word of praise is due to this body for the excellent way in which it is serving the interests of the visitors. The Chamber recognises that the chief asset of Margate is its remarkably restorative air, but the importance of providing for the comfort and the recreation of those seeking this air is not overlooked.

TREATMENT OF DIABETIC GANGRENE BY THE APPLICATION OF HOT AIR.

AT a meeting of the Académie de Médecine of Paris on Feb. 15th M. Dieulafoy described a new method of treating diabetic gangrene which was attended with excellent results. On Sept. 14th, 1909, he saw in consultation a man, aged 64 years, suffering from gangrene of the left leg, which extended as high as two finger-breadths below the knee. The leg was cold and livid and no pulsation could be felt in the popliteal or tibial arteries. The symptoms began with severe pain in the leg on the 12th. The patient had suffered from diabetes for 20 years, and in 12 months had lost 46 kilogrammes in weight. Examination of the urine showed that he was passing 82 grammes of glucose and 30 grammes of acetone in the 24 hours. The general condition was too bad for amputation to be entertained. The patient was in a state of prostration bordering on coma and the pulse was 140 and very weak. A strict anti-diabetic *régime*, injections of cacodylate of sodium and, to relieve the pain and induce sleep, veronal and morphine were ordered. The gangrenous part was treated by the application twice daily of douches of hot air produced by a special apparatus capable of supplying a current of 50 litres of air per minute at temperatures ranging as high as 700° C. This method has been introduced by M. Bonamy, M. Marot, and M. Vignat, who have used it with great success in diabetic gangrene limited to one toe and in perforating ulcer of the foot attended with moist gangrene of part of the foot. In the present case air at a temperature of 300° C. was applied to the gangrenous parts, the temperature being reduced to 100° C. in the neighbourhood of the living tissues. The jet of air was projected a distance of from 5 to 10 centimetres, and each sitting lasted from 30 to 45 minutes. The treatment was not very painful and was well borne. After a week the patient was better, the leg was in a condition of dry gangrene, and there was no odour. The amount of sugar in the urine had decreased to 3·28 grammes in the 24 hours and the amount of acetone to 9·7 grammes. The temperature of the air douche was increased to 400° C., and on Oct. 17th the gangrenous tissues were reduced in volume, blackish, dry, and odourless. The hot air not only dried up the surface of the gangrenous part but penetrated deeply, so to speak "cooking" the limb. On Nov. 17th the treatment had to be suspended for two days as the apparatus got out of order, and the gangrenous part became moist and gave off a fœtid odour. On the 19th the douches were resumed at a temperature of 400° to 500° C., and the gangrene again became dry, the fœtor disappeared, and a line of demarcation formed below the knee. The line of demarcation deepened and the gangrenous parts separated from the sound ones. The leg and foot retained their form, but were much diminished in size, black, and shrivelled up, like the limb of a mummy. The tibia was bare at its upper part and a large "window" formed between the tibia and fibula. The patient regained his strength, and on Dec. 21st sugar and acetone had disappeared from the urine. Amputation was performed at the junction of the lower third with the upper two-thirds of the thigh. The femoral artery was found atheromatous and completely blocked by clot. Union of the wound took place by first intention and recovery was uneventful. In the amputated limb the popliteal artery was found obliterated by arteritis and an adherent clot. The clot was a little organised and contained newly formed blood-vessels and some connective tissue. There was no trace of infection, no small-cell infiltration, and no lymphangitis. In contrast to this case M. Dieulafoy related a case of diabetic gangrene of the foot which after three months became moist and fœtid. Amputation was performed in the lower third of the thigh. The femoral artery was not atheromatous and contained no clot. The anterior tibial artery was obliterated by endarteritis and a stratified organised clot. The posterior tibial artery was obliterated by organised clot and its inner coat was completely destroyed. The vessel was both filled and surrounded by small-cell infiltration and was accompanied by lymphangitis. The vascular lesions in the two cases were similar, but in the one treated with hot air the gangrene remained dry and was not followed by infection, while in the other the life was jeopardised by consecutive infection. The hot-air treatment prevents this infection and eliminates the dangers of septic intoxication and septicæmia.

LA REVUE MÉDICO-SOCIALE: A STORY OF TEMPERANCE.

UNDER the editorship of Professor O. Laurent there is published in Brussels a monthly periodical entitled *La Revue Médico-Sociale*. It has for its subtitle "Clinique et Hygiène Sociale." Undoubtedly this title covers a field of news and of research which is of growing importance. At Budapest last autumn Professor Landouzy spoke of social medicine as the newest and most promising development of medical science. It was no longer a question of treating a patient here or there, but of practising curative as well as preventive medicine on entire communities. Medicine, in so far as it affects not merely individual patients but the inhabitants of a district, a town, or a country, is a subject of study which has unlimited possibilities. Whether the publication before us covers even approximately this ground is another matter. Its contents are largely technical and clinical, whereas an organ dealing with the social measures and reforms that act upon the health of the people should certainly contrive to be understanded of those people. Most of the articles in what is a sort of review of reviews are extracted from medical contemporaries—whose editors, we presume, have no objection—and deal with treatment, only a few being of more general or social interest. On the old problems of abstinence from flesh food and alcoholic drink a temperate view is taken. Dr. Gottschalk has pointed out that vegetarians involuntarily pay homage to the meat eaters by trying to imitate meat dishes with vegetable substitutes, but he found *bœuf à la mode végétarien* "absolutely execrable." He recognised that there are meat extractives which might excite the nerve cells and acting as stimulants might, if taken regularly, create symptoms similar to alcoholism. In this connexion he now says that the morbid craving for alcohol is noticeable especially among those who are badly or insufficiently fed; and this happens quite as often among vegetarians as among others. A form of total abstinence of which everyone must approve is described—viz., the manifesto issued by 20,000 Swedish workmen during the recent general strike. Out of a total population of less than 5,000,000 more than 250,000 workmen remained on strike for five weeks. The most perfect order prevailed the whole time in spite of the animosities and bitterness of feeling resulting from the struggle. At the most critical moment the manifesto of the 20,000 workmen was issued appealing to the working class to abstain completely from all alcoholic drinks till the strike was concluded. Encouraged by this popular demonstration, the Swedish Government ventured to advise all the local

authorities to close the drinkshops. This recommendation was adopted in most places, and the sale of beer at meal times in restaurants alone was sanctioned. The Swedish papers publish figures that show the result of these measures. During the month of August, 1908, there were 1549 persons arrested and tried for drunken and disorderly conduct at Stockholm. In August, 1909, there were only 169 such cases. In Gothenburg, the second most important town of Sweden, which as a seaport town is more frequented by intemperate persons than an inland town, there were 647 persons arrested for drunkenness in August, 1908, and only 113 in August, 1909; 188 in the first week of September, 1908, and 3 during the corresponding week of 1909. But, on the other hand, from Sept. 8th to 19th, 1908, there were 249 arrests for drunkenness, and during the same period in 1909, the strike being then terminated, there were 259 arrests. The actual improvement seems to have been only temporary, but some permanent good may have been achieved, while the possibility of abstinence was demonstrated and a wise example given which might well be followed universally in moments of great public excitement when excesses and consequent breach of the public peace are imminent.

THE PATHOLOGY OF MELÆNA NEONATORUM.

THE condition to which the name of melæna neonatorum has been applied is one of considerable rarity, occurring about once in 1000 births. It is also one of very grave prognostic outlook, since according to the statistics of Silbermann death occurs in 56 per cent. of the cases. Although its occurrence is well recognised, its etiology and pathology are still obscure. An interesting paper by Dr. Hermann Schöppler appears in the *Centralblatt für Allgemeine Pathologie und Pathologische Anatomie* of April 15th, in which two fatal cases are recorded with descriptions of the post-mortem appearances and of the histological changes found in the organs. The first case was that of an infant born of healthy parents. On the second day after birth several evacuations of dark blood were passed per rectum, and three more during the night. On the following day only one dark red motion was passed, but the infant became very weak and anæmic and died on the fourth day, having also on that day passed a dark blood-stained stool. At the necropsy the stomach was found to contain dark black blood, the mucous membrane was blood-stained, and after washing with water showed some linear blood extravasations, but no ulceration or excoriation. The whole of the intestine contained thin, fluid blood of dark reddish colour, and in isolated places blood extravasations were seen in the ileum, jejunum, and colon, but nowhere was any loss of substance of the mucous membrane demonstrable. The liver was anæmic, enlarged, and of greyish-yellow colour. The portal vessels showed no peculiarities. Microscopical examination of the stomach failed to reveal any defects in the epithelium or any signs of inflammation. In the mucous membrane of the intestine there were, however, abundant round-cell infiltrations. The submucous tissue was the site of hæmorrhages and the blood-vessels were distended with blood. No abnormal appearances were found in the liver. The second infant was born of a healthy mother, without any history of hæmophilia, and was apparently strong and healthy at birth, but on the eighth day began to pass stools of thin, bright red fluid blood. During the night the infant passed four more, and next day appeared pale and ill-looking, with a subnormal temperature. After passing numerous stools, some bright red, others dark red in colour, the child died in the evening. At the necropsy appearances similar to those described in the previous case were found. Microscopically the stomach showed no abnormal appearances, but in the intestine the epithelium was found to be wanting in small areas, and abundant collections of small round cells were everywhere visible, giving the whole mucous membrane the appearance of inflammatory infiltration. Hæmorrhages were found immediately under the muscularis mucosæ and the vessels of the submucous layer were engorged with blood. In view of these observations the microscopical appearances in both cases were regarded as suggestive only of parenchymatous hæmorrhages. Dr. Schöppler reviews in a brief but interesting manner previous work upon this condition. The earliest observations of note upon it were those of Landau in 1874, who attributed the loss of substance usually observed in the mucous membrane to the effects of emboli, originating in the umbilical vein. Various other views have been suggested, including the following: asphyxia, pathological increase of a physiological intestinal catarrh, the hæmorrhagic diathesis, and the congestion in the portal and hepatic circulation brought about by the changes in the circulatory system at birth. It is the last explanation which Dr. Schöppler favours. He believes that the ligature of the cord leads to acute hyperæmia of the stomach and intestines, and that in conditions of defective resistance this hyperæmia, together with the further irritation induced by food, leads to inflammation and to fatal hæmorrhage.

UNSEASONABLE OYSTERS.

AN important point was raised by Sir F. Flannery when he asked the Parliamentary Secretary to the Board of Agriculture in the House of Commons last week whether, in view of the near approach of the months of May, June, July, and August, during which native oysters could not be lawfully sold in this country, but during which foreign oysters were freely imported, steps could not be taken to protect the community from foreign oysters which are no more seasonable than British oysters. Sir E. Strachey replied that the Government were not prepared to introduce legislation with a view to protect the home oyster industry from legitimate foreign competition, but if oysters are imported which are unfit for human food steps can be taken for the protection of consumers. We are not aware that oysters imported into this country are submitted to any kind of systematic examination before they reach the consumer, and the probability is that not before mischief was done would any steps be taken. The close time for oysters is, as a matter of fact, only to protect the breedings of real natives. If prosecutions for the sale of natives are withdrawn during the close season it will very quickly diminish the supply of British oysters and send them up again to the prohibitive prices of the later "seventies"—a consummation which will be deplored by all lovers of the delicate mollusc. It is obvious that the importation of foreign oysters during the spawning season is carried on to the detriment of the foreign beds, although these beds may be very large. In the case of British oysters the grounds would most probably be ruined if the oysters were allowed to be sold during the close season. It is the better-class consumer who is the patron of the British cultivator and he is only just recovering faith in the safety of oysters—a faith, however, which may easily be shaken again if the promiscuous consumption of foreign oysters is encouraged. If again typhoid fever is traced frequently to the oyster a much more serious "set-back" to the consumption of the oyster than heretofore will occur. This would be a matter for the greatest regret, since British beds are now being very carefully protected from sewage contamination, and there are few foreign beds that receive this protection. It seems to us, therefore, that it is vital that the close time in Britain should be jealously preserved, and

during this time the consumer should take care not to touch an oyster, unless he appreciates fully that he is eating an imported article.

ENTERIC FEVER IN A HÆMOPHILIAC.

IN the *American Journal of the Medical Sciences* for April Dr. C. W. Larned has reported an interesting case in which enteric fever occurred in a hæmophiliac. The patient was a man, aged 40 years. His father, who was living, gave a history of hæmophilia from boyhood until the age of 23 years, when the tendency to hæmorrhage seemed to have ceased. One out of three paternal uncles was similarly affected. The paternal grandmother was a hæmophiliac and died from hæmorrhage during a confinement at the age of 39 years. The patient had frequent attacks of epistaxis in childhood, which at times were so severe as to cause fainting. After the age of 15 years the attacks became less severe but only slightly less frequent. When he cut himself there was difficulty in arresting the hæmorrhage. In 1902 he was operated on for ingrowing toe nail and nearly bled to death. The attack of typhoid fever began in January, 1908, with headache, diarrhœa, and epistaxis which occurred almost daily. He was admitted into hospital on Feb. 2nd with a temperature of 102·5° F. The temperature ran the ordinary course and six days later reached 103·6°, but did not permanently become normal until March 23rd. Rose spots appeared on Feb. 8th and the Widal reaction was obtained on Feb. 15th. Epistaxis occurred once on Feb. 11th, 22nd, 26th, and on March 1st, 4th, and 10th. There was no blood in the stools at any time. The coagulation time of the blood, taken with Boggs's instrument, was 18 minutes (the normal limits being six to eight minutes). Under calcium lactate the time could be reduced to nearly normal in three or four days, after which it lengthened in spite of the continuation of the treatment. The patient was discharged in good condition on April 2nd. It is noteworthy that no intestinal hæmorrhage occurred. Dr. Larned attributes the successful termination of the case to the fact that at about the age of 40 years the hæmorrhagic tendency abated. This appears to be the only case on record of enteric fever in a hæmophiliac. Another point of interest is that the hæmophilia was inherited from the father.

THE FEEDING OF SCHOOL CHILDREN.

A REPORT of considerable interest has recently been issued by the Board of Education,[1] dealing with the results so far obtained from the Act sanctioning the provision of meals to necessitous school children. With some parts of the report which are not of immediate medical importance, such as the mechanism for supplying the food and of recovering the cost from parents, we cannot here deal; nor does the question of the improvement in the manners of the children brought about by supervision at meal-times fall within our province, though we may express a hope that it may prove to be a factor which "emollit mores nec sinit esse feros." Interesting information is, however, given as to the composition of the meals supplied and the cost of the food. It would seem that most education authorities supply a midday meal or dinner, but that some prefer to give breakfast, presumably on the principle that the child should start its school-day with a due supply of fuel for its vital mechanism. Sample diets are quoted in the report, in which are found such items as Irish stew, Yorkshire pudding, Scotch broth, roly-poly pudding, oatmeal porridge, and so forth; and it appears that a fair meal can be provided for a 1*d.* or a little over this amount. Indeed, at Birmingham, which seems to get specially good value for its money, a diet supplying 625 calories cost only 0·91*d.* This is due to the fact that, as is pointed out by the school medical officer, Dr. G. A. Auden, the carbohydrates and fats form the most important ingredients, supplying as they do most of the necessary heat and energy, only a small quantity of the more expensive proteid matter being really essential. A second point of interest dealt with in the report is the question of the effect of the meals provided upon the health of the children. There is a considerable preponderance of opinion that the results have been markedly good, definite bodily improvement and gain in weight being noted in children previously ill-nourished and backward. The report recognises—and, indeed, it is self-evident—that it is essential for the school authorities to administer the Act in coöperation with the medical officers who are responsible for the health of the children. When measures have everywhere been adopted to ensure this coöperation we can have no doubt that an important step forward will have been taken towards the attainment of a reasonable standard of physique among the children of the poor, which has in too many cases been sadly wanting up to the present time.

[1] Report on the Working of the Education (Provision of Meals) Act, 1906, up to March 31st, 1909. Board of Education, Cd. 5131. 1910. Price 3*d.*

SPINAL ANÆSTHESIA.

IN an annotation in THE LANCET of April 23rd upon Jonnesco's method of spinal anæsthesia reference is made to the death of a native reported in the *Indian Medical Gazette* in whom injection of one decigramme was used in conjunction with strychnine, and below this reference we alluded to a death having been reported from the General Hospital, Birmingham. It has been pointed out to us that readers of the annotation might infer that the use of novocaine led to the fatal result in one or other or both cases. It should, therefore, be mentioned that in the *Indian Medical Gazette* the fatality was clearly attributed to the excess of strychnine employed, while in the case of Birmingham the injection consisted of stovaine and strychnine.

AT the next election of members of Council of the Royal College of Surgeons of England there will be three vacancies; one of these is caused by the death of Mr. H. H. Clutton, and the two others result from the termination of the period of office of Mr. John H. Morgan and Mr. C. B. Lockwood. We understand that Mr. Morgan does not intend to offer himself for re-election, but Mr. Lockwood will stand again. We believe that Mr. Bilton Pollard, Mr. J. Bland-Sutton, and Mr. J. Ernest Lane will be candidates at the approaching election.

A TELEGRAM from the Governor of Mauritius received at the Colonial Office states that for the week ending April 28th 1 case of plague was reported, and that there was 1 death from the disease. A telegram from the Acting Governor of Hong-Kong, received at the Colonial Office on May 2nd, states that for the week ending May 1st there were 3 cases of plague and 3 deaths from the disease.

A MEETING will be held on Tuesday, May 10th, at the Mansion House in support of the fund for new chemical laboratories in connexion with University of London, University College. The speakers will include the Earl of Rosebery, Chancellor of the University; the Earl of Cromer, Lord Avebury, Professor Sir William Ramsay, Sir Henry E. Roscoe, and Sir Felix Schuster.

Lord Strathcona and Mount Royal will preside at the festival dinner of the Metropolitan Hospital, which will be

held on Monday, June 20th, at the Whitehall Rooms, in aid of an urgent appeal for funds on behalf of the institution.

THE Princess of Wales will lay on July 14th the foundation-stone of the Barnato Joel Charity which is to be established in connexion with the Cancer Charity of the Middlesex Hospital.

ROYAL ACADEMY OF ARTS.

THE one hundred and forty-second exhibition of the Royal Academy of Arts was thrown open to the public on Monday, May 2nd. Of particular interest to our readers are No. 106, a portrait of Dr. Edward Liveing by Mr. W. W. Ouless, and, by the ame artist, No. 231, a portrait of Sir Henry Morris in his robes as President of the Royal College of Surgeons of England, both of which are excellent. Of other striking portraits we may mention No. 18, Miss Sylvia Myers, by Mr. J. J. Shannon; No. 66, Professor H. A. Strong, by Mr. G. H. Neale; No. 195, Mrs. Hayes Sadler, by Mr. Charles Sims; and Nos. 406 and 678, portraits of children, by Mr. R. Peacock. Mr. George Henry is represented by at least two extremely clever portraits, No. 427, "The Nightingale," and No. 443, "Lady Margaret Sackville," which is next door to another striking portrait, No. 444, "The Red Cloak," by Mr. S. Melton Fisher. Still another admirable portrait is No. 743, by Mr. Harrington Mann, entitled "The Blue Jacket." Other pictures well worthy of note are No. 36, Mr. Stanhope Forbes's "Vegetable Shop"; No. 42, "Tristesse," by Monsieur Jean Paul Laurens, an honorary foreign academician; No. 83, "Fugitive," by Mr. Briton Riviere; and two pictures by academicians lately deceased, one being No. 101, a portrait of Mr. E. A. Abbey, by the late Sir William Orchardson, and the other, No. 127, entitled "The Cold North," by Mr. J. M. Swan, the latter being a picture of polar bears painted as none but he could paint them, for he was always successful in rendering the curious resemblance which the head of a polar bear has to that of a ferret. No. 174, by Mr. A. E. Borthwick, a picture entitled "The Presence," is one of the few pictures in the exhibition showing high imaginative quality. Passing on to other pictures, we may mention No. 266, by Mr. Chevallier Tayler, entitled "The Children's Hour"; No. 293, "Sunset," by Sir E. A. Waterlow; No. 368, by Mr. T. C. Dugdale, entitled "A Caller, Candle-light, and Tea"; No. 360, "Boys," by Mrs. Laura Knight, a clever study of boys bathing, full of light and air, which we are glad to see has been purchased by the Chantrey Fund; and No. 362, by Mr. Hugh G. Riviere, a portrait of Mr. Frank Benson wearing his O.U.A.C. coat, a good portrait, but defective in the painting of the legs, for Mr. Benson's left leg looks as if he had suffered from infantile paralysis. No. 484, by Mr. William Strang, is called a "Portrait Group." It is magnificently painted, exceedingly clever, and as ugly as it is clever. Mr. J. W. North sends one of his delightful landscapes in No. 522; and we have left to the last what are possibly the most interesting pictures in the exhibition—viz., Mr. Sargent's four impressionist sketches, Nos. 107, 136, 529, and 619. The first of these is entitled "Glacier Streams," while the other three deal with scenes in Albania and Corfu. They give the light and colour and general sense of atmosphere which were so marked in his sketches of Venice exhibited some years ago at the Carfax Gallery. Mr. Sims, besides his portrait mentioned above, has two of his rainbow and water phantasies in Nos. 543 and 903.

THE GOSPEL OF CLEANLINESS.—In his annual report to the Aberystwyth rural council Mr. J. James concludes as follows: Were I to preach in this land of preachers and sermons my text would be "Cleanliness is next to Godliness," and I would accordingly divide my discourse into three heads—firstly, cleanliness; secondly, cleanliness; thirdly and lastly, cleanliness. I would dilate upon the necessity of having clean air to breathe, clean nourishing food to eat, and clean water to drink; a clean house to live in, with clean surroundings. I would also emphasise the virtues of personal cleanliness and would condemn the mere ablution of hands and face as hypocrisy, humbug, and fraud. I would end my sermon by impressing on the minds of my audience the truth that a damp dwelling-house is a safe way to sanitary perdition.

SANITATION IN INDIA.

I.

THE courtesy of the various authorities connected with the sanitary aspect of India has once more enabled us to review the administration concerning sanitation in our great Eastern dependency. We shall accordingly notice first the matters relating to sanitary administration generally, as disclosed in the reports furnished to us; next, the administration of the hospitals and dispensaries; and thirdly, the reports in regard to the jails and asylums and vaccination.

THE SANITARY REPORTS.

The reports received embrace those for the sanitary administration of the North-West Frontier Province (Lieutenant-Colonel G. W. P. Dennys, I.M.S.), the Punjab (Major E. Wilkinson, I.M.S.), Bengal (Lieutenant-Colonel F. C. Clarkson, I.M.S.), the Province of Eastern Bengal and Assam (Lieutenant-Colonel E. C. Hare, I.M.S.), Burma (Major C. E. Williams, I.M.S.), and the Central Province and Berar (Colonel P. A. Weir, I.M.S.), the name of the sanitary commissioner following that of the province in each instance.

Comparative Vital Statistics.

The comparative vital statistics of the various provinces of India for the years 1908 and 1907 are as follows, stated in ratios per 1000:—

	Birth-rate.		Death-rate.	
	1908.	1907.	1908.	1907.
Eastern Bengal and Assam	41·14	37·01	30·74	29·30
Bengal	36·09	37·70	33·56	37·72
Central Provinces	52·84	52·46	38·12	41·70
Burma	34·84	32·82	28·23	26·60
North-West Frontier Province	37·30	32·52	35·83	35·12
Punjab	41·80	40·80	50·70	62·10

Contrasted with the years 1902–06 the ratios are as follows:—

	Birth-rate.		Death-rate.	
	1902–06.	1908.	1902–06.	1908.
Eastern Bengal and Assam	39·31	41·14	30·74	32·19
Bengal	39·08	36·09	34·63	38·56
Central Provinces	50·47	52·84	35·21	38·12
Burma	32·90	34·84	23·04	28·23
North-West Frontier Province	36·30	37·30	29·60	35·83
Punjab	43·30	41·80	45·30	50·70

Malaria.

Coming now to some of the chief diseases affecting the health of the above provinces we will first notice malaria, which accounts generally for the highest state of sickness.

In Eastern Bengal and Assam the ratio for fevers for 1908 was 22·37 per 1000, an increase of 1·20 over that of 1907, but lower than the decennial rate of 22·97 per 1000. Captain Ritchie, I.M.S., the civil surgeon of Jalpaiguri, drew up a scheme of operations against the disease. This comprised (*a*) quinine distribution by the free issue of quinine from July to December; (*b*) protection against mosquitoes by screening with wire gauze; and (*c*) the destruction of larval mosquitoes. The last measure consisted of (1) cleaning and levelling drains, jungle cutting, and filling up pits; and (2) spraying the mosquito breeding grounds with kerosene oil. Unfortunately, owing to the transfer of Captain Ritchie to another station, the work was interrupted during the four most important months, but 94,000 grains of quinine were distributed, and the other measures indicated above were carried out. The endemic index, which was formerly shown by Dr. C. A. Bentley to be 45 per cent. amongst children, was found to be 29 per cent. under 10 years of age by a "spleen census" taken at the end of March. There is no record, however, showing at what time of year Dr. Bentley's index was taken, whilst the percentage of enlarged spleens found at the end of the rainy season would certainly be higher than that in March.

With regard to blackwater fever the report of the Government Commissioner is now expected daily; it has been made clear that there is a close relationship between blackwater fever and exposure to intense malarial infection, and that an almost certain immunity can be obtained from the regular use of quinine combined with mosquito protection.

In Bengal the fever ratio was 23·44, compared with 23·18 in 1907, and 22·21 for the years 1903–07. The anti-malarial measures carried out consisted of the filling up of hollows and depressions, clearing jungles, treating foul tanks and collections of water with crude petroleum, and drainage work. The natives greatly appreciate these efforts. Measures have been taken to cheapen the price of quinine and to issue it not only in the form of powder but also in small tablets.

In the Central Provinces and Berar the deaths from fevers were 213,908, as compared with 217,773 in 1907, but the Sanitary Commissioner reports that the presumption is that the increased mortality attributed to fevers cannot be laid entirely to malaria, owing to lung diseases, such as tuberculosis, having been included, or acute dysentery and diarrhœa. Great attention has been paid to drainage and filling up of borrow pits and other depressions. The breeding places of mosquitoes have been treated with kerosene oil; about 72,300 cubic feet of pools and hollows were filled in during the year. Packets of quinine were also sold to the public.

In Lower Burma the fever death-rate was over 10 per 1000; in Upper Burma it was 8·85. Excellent work was done by Captain J. Good, I.M.S., by his well thought out system of drainage and extermination of the anopheles mosquito. In other parts of the province quinine was sold at cost price in the form of tablets, which are found to be more appreciated than powders. Proposals have also been made by the Sanitary Commissioner for the enactment of facilities for selling quinine at a cheaper rate.

The North-West Frontier Province showed a considerably smaller registration of deaths from fevers; the ratio was 26·62 per 1000, that for 1907 being 27·42.

In the Punjab fevers were by far the most important cause of the very high mortality recorded during 1908, furnishing a death-rate of 34·66 per 1000 out of the death-rate from all causes of 50·73, thus causing more than two-thirds of the total mortality of the province. Two-thirds of this great mortality occurred during the last four months of the year. The fever death-rate in 1907 was 20·16, and in the quinquennium 20·6, so that the mortality in 1908 was excessively high. The rate has, in fact, been only twice exceeded—namely, 38·05 in 1890 and 34·83 in 1892. In all these years the monsoon rainfall was very heavy, causing extensive floods, and in all the floods were followed by severe outbreaks of malaria. Breeding places were thus formed for mosquitoes. The malarial outbreak caused a very high mortality amongst children, the mortality being rather more than half the total fever mortality of the whole population under 10 years. Preventive measures for the destruction of the mosquito were undertaken, accompanied by the distribution of quinine either free or at cost price. The heavy and frequent floods rendered the destruction of the mosquito breeding places impracticable.

Plague.

Let us now return to plague, that disease which has effected such serious havoc in India of recent years. In Eastern Bengal and Assam Lieutenant-Colonel Hare luckily has no cases to report for 1908. The Plague Investigation Commission has been invited to extend its researches into this province to ascertain the causes which give this part of India immunity from the disease, an invitation which should result in benefit to the other parts of the country where the disease is rife.

In Bengal, again, we note with satisfaction that the mortality from this disease was the lowest since the year 1901, only 15,948 persons falling victims in 1908, against 83,602 deaths in 1907. 13 districts were free from the disease, whilst more than two-thirds of the deaths occurred in the Patna division. The climax of the epidemic occurred as usual in March, and Calcutta returned the highest death-rate. With respect to the measures for prevention, evacuation of the infected dwellings was the most popular, and this was effected often without any prompting, while chemical disinfection was carried out only in a few special cases at the instance of people themselves. Itinerant medical subordinates were employed in certain districts for the treatment of the cases and for supervising preventive measures. Rat destruction was carried out in almost all the districts of Behar, but the system of payments of rewards for dead rats is being gradually discontinued, the work being done by organised staffs. To catch these vermin traps were chiefly used, the people objecting to the use of poison. Major Gwyther, I.M.S., with respect to rat killing, holds that this made no appreciable difference in the numbers of these animals, as he thinks that in consequence of the scarcity and high prices of food-stuffs prevailing in his district there was less waste after meals, less thrown away, less food for rats, and therefore a less close connexion of the rats with human habitations.

With regard to inoculation as a preventive measure, this was still viewed by the people with great distrust. During the year 2710 inoculations, as contrasted with 2766 and 1777 in the two preceding years, were performed in the districts, whilst in Calcutta there were 3043 cases against 3123 and 101 in 1907 and 1906. Twelve cases of plague with four deaths at Bhagalpur, two cases at Monghyr, and one case at Muzaffarpur (in both instances with no deaths) are reported amongst the inoculated. It is to be earnestly hoped that the present attitude of the people with regard to this valuable measure of protection will be altered for the better. Lastly, plague pamphlets were freely distributed.

In the Central Provinces and Berar the total number of deaths from the disease was 6236. The preventive measures adopted to meet the epidemic were rat destruction, evacuation, and inoculation. Rat destruction was not universal owing to religious prejudices, evacuation was freely resorted to, whilst inoculation was unequally accepted, 19,323 persons receiving the prophylactic. The Sanitary Commissioner considers that the check to the disease by this measure proved satisfactory.

In Burma the total number of deaths from plague was 6752, against 9429 and 8637 in 1907 and 1906 respectively. This considerable reduction in the mortality was shared by all the division. In Lower Burma certain districts escaped plague infection as in previous years, owing to their isolation from infected regions. With regard to the preventive measures employed, with the exception of the Irrawady district, where the earth-oiling of the dwellings was adopted, reliance was placed on cleaning and improving the sanitary conditions generally of infected and threatened areas. In many cases the work was performed in too perfunctory a manner, but where it was thoroughly carried out, as in Rangoon, there has been a marked decrease in the prevalence of the disease. Rat destruction has also been carried out since 1906, and experience shows that where the rat population has suffered severely from the disease, almost to extinction, in any large plague-infected area, that locality has remained free from human plague for the whole of the succeeding plague season. Evacuation proved to be the most effective measure for the suppression of outbreaks. Earth-oiling in the Irrawady division postponed the onset of the epidemic at Henzada, but the mortality for the year as a whole was not greatly reduced by this method. The Sanitary Commissioner well points out that the real source of the predisposition to the disease lies in the insanitary conditions amongst which the poorer classes live, which foster the prevalence of rats, insects, and vermin. Anti-plague inoculation was employed generally, but was nowhere popular, and only was received willingly where there was any great mortality from the disease. Experiments are also being conducted with the Danysz virus, and a certain degree of success is recorded.

Coming now to the North-West Frontier Province, we find there were only 563 deaths recorded from plague, against 1547 in the previous year, only the two districts of Peshawar and Dera Ismail Khan having been visited by the disease.

Finally, regarding the Punjab, a most satisfactory state of affairs has existed with regard to this affection in 1908. This year has been by far the mildest as regards plague that has been experienced in the Punjab since the disease became widespread. To show the great loss which the province has sustained from this cause it will suffice to say that since its first invasion up to the end of 1908 no less than 2,061,885 deaths have resulted from it. In 1908, only 40,106 deaths were reported. The satisfactory nature of the decrease in the numbers is at once evident, when we remember that the Punjab furnishes some of the most valuable soldiers to our Indian army. The chief cause of this decrease in the mortality, according to the Lieutenant-Governor, cannot be attributed to inoculation, nor to the destruction of rats, nor to the absence of rainfall in 1907, but to the fact that the disease is probably working itself out. At length it would seem that this scourge is gradually being removed from the land. The Sanitary Commissioner,

however, would lay some influence to the less incidence of humidity, and he certainly produces strong arguments in his favour. Unfortunately, the natives still show little evidence of actual interest or desire to help themselves in the matter.

The measures undertaken for prevention have been rat destruction, which has had a considerable mitigating influence; evacuation, which has, however, been extremely unpopular in this province; and inoculation, 52,629 operations having been performed. The latter measure is not, however, accepted unless the disease is near and danger imminent, although its good effects are fully recognised. One excellent feature of the work in 1908 has been a large extension of general medical relief afforded by the plague medical staff, specially designed panniers containing drugs and instruments having been supplied to it; thus valuable help was given during the cholera and malarial outbreaks. Two special investigations also were carried out as to the effect of rat destruction and as to the recrudescence of the disease.

Cholera.

Let us now review the incidence of cholera as shown in the above reports.

In the Province of Eastern Bengal and Assam the provincial death-rate, 1·99 per 1000, was less than usual, but several of the Assam districts suffered severely owing to the repeated importation of fresh centres of infection during January and June. The cholera reports from the steamers during this period show that among the tea-garden labourers no less than 766 cases occurred on 116 vessels. The special arrangements made last cold weather to deal with the immigrant traffic, however, seem to have been attended with some success.

In Bengal the mortality in 1908 was unfortunately, in contrast with the foregoing, the highest ever recorded, amounting to 5·32 per 1000. The climatic condition of the year affected both the sufficiency of the drinking water and the food-supply. Only six thanas were free from the affection. This large mortality arose owing to the famine, with a large rise in the prices of food grains, causing the use of highly injurious foodstuffs by the poorer classes, and especially owing to the villagers drinking water from foul tanks during scarcity of water. But amidst this large increase we are glad to see that the most satisfactory results were due to the excellent precautions generally taken at all the important fairs and religious festivals held during the year. Additional sweepers were provided, all the wells were disinfected, and doolies were kept ready at several places for the removal of the sick and the dead. Great attention was paid to the sanitary arrangements in the various lodging-houses. In this way excellent results were attained. For instance, at the Sonpur fair, the biggest in the province, attended by 400,000 people, only three cases of cholera occurred. Again at Sonpur with 30,000 people attending only two stray cases occurred.

In the Central Provinces and Berar there were 9048 deaths as against 4291 in 1907, or 0·76 and 0·36 per 1000 respectively. The disease was only at all serious in two districts, and in particular the town of Chindwara was successfully protected from a threatened epidemic. Fortunately, the objections to the use of permanganate of potash in wells seem now to have disappeared. This measure, together with the issue of medicines with the aid of the vaccination staff, formed the chief means of meeting the epidemic.

In Burma the disease showed a tendency to increase, in spite of the greater attention devoted to sanitation; there were 11,911 cases as against 8378 in 1907. There was unfortunately some difficulty in getting the people to attend to the sanitary condition of their wells. Such wells are not provided with a cover and no well is set apart for the washing of clothes. The parapets frequently are in a ruinous state, whilst the masonry lining is not applied to any considerable distance below the surface of the ground. The measures adopted by the energetic Sanitary Commissioner, such as the use of permanganate for wells, closing of suspected wells, advising the people to use only cooked food and boiled water, and sanitary precautions for the excreta, were found of little avail amongst an ignorant and panic-stricken population. Voluntary and spontaneous evacuation of an infected village gave the best results.

In the North-West Frontier Province cholera was worse in 1908 than in any year since the inauguration of the province. The first case was in Peshawar in a pilgrim from Hardwar, who had been attending on a friend with the disease. From this origin it spread to other parts of the province. The civil surgeons of the districts affected all agreed that the agency of flies was the chief cause of the spread, and that water was only implicated to a small extent. There was a terrible epidemic of flies at Peshawar when the disease first broke out. Pamphlets were wisely distributed by the civil surgeons of Peshawar and Bannu concerning its prevention and treatment.

Lastly, in the Punjab after four years of but slight prevalence cholera broke out in epidemic form in 1908, causing a death-rate of 0·61 per 1000 and accounting for 12,297 deaths. The outbreak was primarily traceable to the fairs held at Kabás and Jawálámuki. A further outbreak was traced to a pilgrim returning from Hardwar. The Naina Devi Fair was responsible for another severe outbreak, thus once more showing the inherent dangers of these gatherings of the people. Kabás was responsible for 6000 deaths. The Sanitary Commissioner narrates an interesting case in which there is strong presumption that the incubation period of the attack in question was between three and four days.

These interesting reports are evidence of the unremitting labours for which the Government of India is indebted to its Sanitary Commissioners. It may not be invidious, perhaps, to mention especially the name of Major Williams, I.M.S., on whom the mantle of Colonel W. G. King, I.M.S., the late Sanitary Commissioner of Burma, has not unfitly descended.

(To be continued.)

THE EARLY TREATMENT OF THE INSANE IN THE COUNTY OF LONDON.

THE Asylums Committee submitted to the London County Council on May 3rd the draft of a Bill embodying the decision of the Council to seek powers to establish and maintain a receiving house for the early treatment of persons alleged to be insane.[1] The committee stated that the Bill followed the lines of previous Lunacy Acts Amendment Bills promoted by the Council, but two variations had been decided upon since the question was last considered. The first variation provided for the appointment by the Asylums Committee of medical men who should act as certifying practitioners. The principle of the establishment of receiving-houses, which the committee had advocated for many years, was endorsed in the report of the Royal Commission on the Care and Control of the Feeble-minded. Amongst the recommendations of the Commission was one for the appointment of certifying medical practitioners (Recommendation 36) who should take the place of the ordinary medical practitioner now called in by the justice of the peace to certify the insane. In the County of London, in consequence of the majority of alleged lunatics being brought into the workhouses, a practice had grown up in most parishes and unions by which the infirmary or workhouse medical officer was called upon by the justice of the peace to certify as to the condition of the alleged lunatic, and usually a fee was paid to the medical officer for each certificate he gave. The Royal Commission having come to the conclusion that there should be properly appointed certifying practitioners, the committee had thought it desirable to introduce this provision into the Bill. It was also proposed to make it compulsory that every alleged lunatic should go in the first place to the receiving house. In former Bills it was made optional for the justice of the peace to order a lunatic to be sent to the receiving house or to the asylum, as he thought fit. It was proposed by Clause 6 of the Bill that in every case the certifying justice, if he thought that the person brought before him ought to be detained, should, instead of proceeding in the manner provided by the Lunacy Acts, 1890–8, direct such person to be received and detained in the receiving house.

The Asylums Committee next dealt with the decision of the

[1] See THE LANCET, July 24th, p. 249, and Oct. 16th, 1909, p. 1161.

Council, on the advice of the Finance Committee,[2] to seek powers for the establishment of one instead of two receiving houses as originally recommended. The committee urged the Council to give this point further consideration. In the report submitted last July the committee expressed the opinion that two receiving houses, one on the north and one on the south side of the Thames, each to accommodate 250 patients, would be sufficient for the needs of London, and that the total cost should not exceed £150,000 to £180,000. This suggestion was put forward as the result of long experience of the numbers and classes of patients received at the asylums and of some knowledge of the conditions under which alleged lunatics were dealt with at present in the London workhouses and Poor-law infirmaries. The proposal to establish receiving houses should not be regarded as altogether tentative, especially in view of the recommendations of the Royal Commission on the Feeble-minded. The only question was as to the total accommodation required. One receiving house could not cope with the whole of the 7000 or 8000 cases of alleged lunacy dealt with annually in London—some 150 cases a week. It would be necessary, therefore, to schedule a district more or less extensive which a receiving house was to serve. In the area where the Receiving House Act operated there would be a vital alteration in the method of dealing with alleged lunacy; for instance, it would be unlawful for an alleged lunatic to be received in a workhouse (except under the conditions set out in Clause 21 of the Bill) and the method of certification would be new. No doubt the Council would wish to provide, in due course, sufficient accommodation to allow of the whole county having the advantage of the receiving house system and its attendant benefits; otherwise there would exist the anomaly of one law operating in one part of the county and another in the remainder. The committee thought, therefore, that the Council should not limit its application for powers to one receiving house, but should put itself in a position to provide whatever accommodation might be found necessary. The advantage of the receiving house principle had been recognised so long, and the urgent need for giving practical effect to it had been so strongly emphasised by the Royal Commission that the committee believed the Council, on further consideration, would agree there was no need to treat the proposal to apply for powers as though the application were directed to some end entirely experimental, leading in a direction altogether unknown. The committee asked the Council to rescind the resolution of Oct. 12th, 1909, limiting the application to one receiving house, and to resolve instead:

> That application be made to Parliament in the session of 1910 for powers to enable the Council to establish and maintain receiving houses for alleged lunatics in the County of London.

The Finance Committee, reporting on the proposal, recapitulated its reasons for opposing the larger scheme (reported in THE LANCET of July 24th, 1909), and pointed out further that the Asylums Committee had introduced new matter, particularly the proposal making it compulsory that every alleged lunatic should go in the first place to a receiving house. The Finance Committee was still without information which would enable it to advise the Council as to the financial effect of the present proposals. It certainly was not present to its mind at the time of the earlier report that an essential part of the scheme was that every person alleged to be a lunatic should pass through the receiving house, and such a scheme formed no part of previous Lunacy Bills. If the Bill was approved in the form desired by the Asylums Committee the Council would be definitely committed to a new policy as regards the early treatment and certification of lunatics, and, however desirable the changes might be, they would involve considerable expenditure, on both capital and maintenance accounts, of unknown amount. In the opinion of the Finance Committee the Council would be ill-advised to agree to the present proposal of the Asylums Committee, or to any extension of its previous decision until it was in possession of full information as to cost. On general and financial grounds the Finance Committee opposed the recommendation.

The report was not reached until 1.30 A.M., when the Council had been sitting for 13 hours, so the consideration of the matter was adjourned.

[2] THE LANCET, vol. ii., 1909, p. 1161.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A COUNCIL meeting of this association was held at 34, Copthall-avenue, E.C., on April 28th.

The chief business before the meeting was the annual meeting of the association at Halifax. Dr. MAJOR GREENWOOD, the honorary secretary, said that Dr. A. Drury had arranged for this to take place on June 29th. The Mayor of Halifax would open the conference at the Town-hall, and later the Mayor and Mayoress would entertain the members at afternoon tea. The Mayor and Mayoress had also accepted the invitation of the association to the annual dinner in the evening.

Dr. DRURY said he had that week called a meeting of the medical officers of the Halifax Union, who had pledged themselves to give all the assistance in their power to promote the success of the conference, and he could assure the council that no effort would be spared to make the gathering at Halifax a thorough success.

The council decided that invitations should be sent to all members of the Poor-law Medical Service in England and Wales.

The HONORARY SECRETARY reported that the answers to the questions submitted to the outdoor Poor-law Medical Service had been analysed by himself and Mr. A. Withers Green, with the following results:—

1. Are you in favour of the abolition of boards of guardians throughout England and Wales?—To this question 37 per cent. of the answers were in the affirmative and 59 per cent. in the negative.

2. What authority would you propose to set up?—To this question 12 per cent. of the answers were in favour of an "*ad hoc* authority," 22 per cent. for the statutory committee of the county council, and only 3 per cent. in favour of the abolition of any special Poor-law authority. N.B.—Only the answers of those who wished for the abolition of the guardians were counted with regard to this question.

3. Should any difference be made between medical and other public relief beyond the disfranchisement in the case of the former?—77 per cent. of the answers were in the negative, 8 per cent. in the affirmative.

4. Should there be any "test," or "deterrent" such as the present medical order, to regulate the granting of medical relief to poor applicants? Or should the latter be permitted to claim public assistance subject to no other liability than having to pay the cost of the same, if proved to be in a position to?—83 per cent. were in favour of a test, 11 per cent. opposed to it.

5. Are you in favour of a public assistance medical scheme based on provident dispensaries, subsidised by the State, and contract practice generally?—83 per cent. of the answers were opposed to this and 12 per cent. in favour.

6. Are you in favour of a public medical service based on an amalgamation of the present Poor-law Medical Service with the sanitary medical service?—60 per cent. were opposed to this and 33 per cent. in favour.

7. Do you approve of the district medical officer being made relieving officer so far as medical relief is concerned?—76 per cent. opposed to it; 22 per cent. in favour.

8. Are you in favour of "whole-time" or "part-time" appointments in any reformed public assistance medical service?—17 per cent. were in favour of "whole-time" appointments; 71 per cent. were in favour of "part-time" appointments.

9. Are you in favour of a reform of the present Poor-law system, or would you prefer a "break-up"?—11 per cent. in favour of a "break-up"; 82 per cent. in favour of "reform."

10. Do you think that a "unified medical service," that attended to all poor applicants with no other test or deterrent than the liability to be compelled later to pay the cost, would, or would not, be dangerous to the interests of all general practitioners in poor districts?—Answers in the affirmative were 90 per cent.; in the negative, 6 per cent.

This analysis was approved by the council, and it was decided that resolutions framed on these answers should be submitted to the general meeting in Halifax in June, and, if carried there, should again be brought forward for confirmation at the meeting in London during the British Medical Association week in July–August next.

NURSING CONFERENCE AND EXHIBITION.

THE Third Annual Nursing and Midwifery Conference and Exhibition was held at the Horticultural Hall, Westminster, from April 27th to 30th.

The ceremony of opening the Conference was performed by H.R.H. Princess Christian, who was received by Lady Balfour of Burleigh, Sir Dyce Duckworth, and Dr. F. H. Champneys. Princess CHRISTIAN said she had taken a deep interest in nurses and their work for the past 40 years, and felt that every effort should be made to ensure nurses being the perfect help to the doctor which now they were expected to be.

Dr. CHAMPNEYS occupied the chair for the first day's session, which practically covered the midwifery topics.

Miss LUCY ROBINSON read a paper on the Living Wage for Midwives in Rural Districts, showing that if the fees obtained by midwives all through the country were equally divided among those who are notified as practising the earnings of each midwife would amount to £16 a year.

Dr. A. NIMMO WALKER, speaking on the Prevention of Infantile Blindness, described the methods adopted in Liverpool. On the notification of any inflammatory condition of the eyes of the newly born, a visitor is sent to take a swab of the discharge. If on examination this is found to contain bacteria the authorities of the Eye Hospital urge the immediate removal of the child *and its mother* to the hospital, where it can be under constant supervision and treatment without being deprived of its natural sustenance. An ambulance is sent for the patient, and it is stated that so far no evil has resulted from the early removal, though 200 cases have been treated in this manner in the last two years. The duration of their stay in hospital is from one to six weeks. In the last year the amount of blindness has been halved, though the number of cases admitted was double that of the previous year.

Mr. F. E. FREMANTLE, medical officer of health of the county of Hertfordshire, spoke in favour of the report of the Departmental Committee appointed to consider the working of the Midwives Act, of which he was a member. The findings and recommendations of that committee did not commend themselves to subsequent speakers, nor, to judge by comments, to the majority of the audience.

Miss ALICE GREGORY, who sits on the Midwives Committee of the London County Council, declared that while the interests of the Central Midwives Board, of the medical societies, the ratepayers, and, incidentally, of the midwives, had been considered, the mother had been left out as of little or no account. The Act had made it compulsory on midwives to recommend the attendance of a medical man, but in the tardy arrangements for the payment of such attendance it could only suggest pauperising the patients. It had forbidden unqualified women to attend labour for gain, and had provided no qualified persons to take their place in the scattered rural districts. It had hung a rope round the neck of the handy woman, but rather than pay for skilled attendance it left her, trusting to her human kindness, to go on attending *for nothing* rather than let her neighbour die; and if any harm came of it the authorities would probably treat her leniently. It had also declined to raise the standard of training, content to let England be behind every other European country in this. In the discussion which followed Dr. MARGARET MERRY SMITH, Dr. A. H. BYGOTT, and others took part.

Mrs. LAWSON, President of the National Association of Midwives, Manchester, then read a paper urging reform in the constitution of the Central Midwives Board and direct representation of midwives. Mrs. STEPHEN GLANVILLE, speaking on the same subject, urged the professional rather than the personal element in all their movements towards progress; but while admitting that a higher standard of education was needed, she claimed that midwives, and especially those who belonged to a society such as the Midwives' Institute, had the interests of the mother and child as much at heart as the medical representatives on the Board. Dr. CHAMPNEYS, in closing the session, agreed with the last speaker in the necessity for putting aside personal and even society interests in the effort to carry out the main principle of the Act. To meet some of the difficulties in rural districts he suggested the endowment of a midwife, just as beds are endowed in hospitals.

Sir DYCE DUCKWORTH presided over the second day's session, when the subjects dealt with included Fever Nursing, by Dr. SIDNEY PHILLIPS, and the Duties of Probationers in Provincial Hospitals, by Dr. E. B. RECKITT. Discussing the danger of infection to attendants on fever cases, and the complications which sometimes ensue, Dr. Phillips gave it as his opinion that these conditions were intimately connected with crowding in the wards and consequent reduction of the quantity of fresh air obtainable.

Poor-law nursing in its various aspects and branches occupied Friday's afternoon session, Miss BRODIE-HALL presiding. Papers were contributed by Miss GIBSON, matron of the Birmingham Infirmary; Miss WILSON, whose paper was read for her; and Miss DOUGLAS TOWNSEND. The general feeling of the meeting at the conclusion appeared to be that while small infirmaries could not supply the variety of cases and experience necessary to train nurses efficiently, the work and equipment of the large institutions under the Poor-law were in every way equal to those of large general hospitals. Under these circumstances the tiresome and invidious distinction between hospital and Poor-law nurses ought to die out; and it was hoped that in any future scheme for the registration of nurses the same certificate would be available for both.

In the evening Miss E. L. EDEN gave a lantern lecture on the History of Nursing, exhibiting a unique collection of photographic slides representing nursing in all ages. The earliest of these, dating from ancient Egyptian times and copied from the walls of the Pyramids, showed the attendance on women in childbirth. An interesting photograph, taken from the Vase of Sosias in the Berlin Museum, represented Achilles bandaging the arm of his friend Patroclus, and using a double-headed bandage. Coming down to the Middle Ages, the pictures gave a glimpse of the wards of the Hôtel Dieu de Paris, which was nursed by the Augustinian nuns for 500 years. Here there were beds containing two and even more patients, while another slide showed the nuns at work washing the hospital linen in the river. Among a number of excellent photographs was one of a plague attendant's costume of the seventeenth century, with the curious beak-like projection over the nose through which the air was inspired over a disinfecting material. The last pictures showed the development of modern nursing in the up-to-date equipment of a ward in St. Bartholomew's Hospital, an operating theatre, and a district nurse belonging to the Queen Victoria's Imperial Institute entering a cottage on the west coast of Ireland.

Saturday's conference dealt with a variety of subjects, including massage, maternity clubs and crèches, Territorial nursing, and State registration. In the afternoon Dr. MURRAY LESLIE occupied the chair, and the principal speakers were Miss ANNIE MANLEY, a founder of the Incorporated Society of Trained Masseuses, Miss KLAASSEN, and Miss BARTON, matron of the Chelsea Infirmary. Among the speakers in the evening, when Mr. JOHN LANGTON presided, were the Hon. SYDNEY HOLLAND, Sir VICTOR HORSLEY, Dr. and Mrs. BEDFORD FENWICK, and Miss HAUGHTON, matron of Guy's Hospital. The subject discussed was the State Registration of Nurses, and it was warmly debated. It was a rule of the conference that no resolutions were to be put.

The exhibits displayed on the stalls of many of the leading firms of instrument makers included the latest developments of scientific surgery for the use of medical man, nurse, or patient. A mask and face-protector on Messrs. Garrould's stand attracted considerable attention, and various improved bed-tables and rests were to be seen. A new "home Pasteuriser" was exhibited by Messrs. Townson and Mercer. Every variety of milk food and prepared milk had its place.

Attention was drawn at one of the sessions of the Conference to a small stall at which might be seen models of female urinettes recommended for use in women's free

lavatories. These models, made at the suggestion of Dr. R. Murray Leslie by Messrs. Adamsez, obviate the danger of infection by their shape and the absence of any woodwork.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

THE annual general meeting of the London and Counties Medical Protection Society was held at 31, Craven-street, Strand, London, on April 27th, Dr. G. A. HERON being in the chair.

The annual report of the council adopted by the meeting gave an interesting account of the strong financial position of the society, and stated that there had been a steady increase in the membership during the past year. The following resolution of the midwives committee of the society was approved by the council:—

That having regard to the proposed payment by boards of guardians of the doctors called in to assist midwives, the London and Counties Medical Protection Society recommends the medical men in each union to meet and confer on the subject, and to agree as to what fee, or fees, they will accept, and then combine to insist on such fee or fees being paid (or guaranteed) by the guardians, and paid on the statement of the medical man that he is unable to obtain payment of his fee from the patient or her representatives.

The CHAIRMAN in the course of his remarks referred to this resolution and declared that the matter was one of importance not only because it dealt with a branch of work which was of the very first consequence to the general practitioner of medicine, but because he thought that a fight properly carried out by the medical profession with the local authorities who were to work the Act would be, if it were prudently conducted, productive of much good to the profession. If they looked at what had taken place about the Midwives Act they would see that it followed exactly the lines of every other work which was offered to the medical profession by local authorities. When it came to a question of fees, the local authority settled the fee. The medical profession was not asked whether it would work for those fees, but it was practically put in this way: "There is your fee, take it or leave it." He could not but think that that should not be permitted to go on. He thought that the medical profession, following the recommendation of their council, in every locality in the country when its local authority was considering the payment which it would make for midwifery, should meet and agree that they would receive certain fees and only those fees, and when the local authority said "There is our scale of fees, those of you who like it can take it," the answer should be: "We have nothing to do with your scale of fees; that scale may suit you but it does not please us. Our position is, we are not going to work for the fees which you dictate, but for fees which we ourselves settle." The local medical men should say that unless the authorities accepted their terms they would have to look to others for having the work done. That was the only way in which the medical profession would ever make itself of the faintest importance to local authorities where fees were concerned. If they did not unite and insist upon their rights, as lawyers and others had done, medical men were undeserving of any consideration at all. He thought the day had gone by when that sort of thing should be treated in a sentimental manner, and if anyone said he was advocating trades union methods he had no objection to accept that position and to say it was the duty of a man, which he owed to his wife and children and those dependent upon him, that he should insist upon being adequately paid for what he did, while he should be the judge of what adequate payment was. He was at all events entitled to be heard.

UNIVERSITY OF LONDON: KING'S COLLEGE.—A short course of special lectures in physiology, the subject being the Relationship of the Brain to Voice, will be delivered by Dr. F. W. Mott in the Physiological Laboratory of King's College on Monday afternoons, May 23rd, 30th, and June 6th, at 4.30. These lectures are free to all members of King's College, all students in medical schools, all internal students of the University of London, and to medical men on presentation of their cards.

Public Health.

REPORTS OF SCHOOL MEDICAL OFFICERS.

The County of Berkshire.—For the purpose of the medical inspection of school children the county has been divided into two parts: one includes the Bradfield rural district and the district eastwards of it, the other all the administrative country westward of Bradfield rural district. The school medical officer is Dr. Gerard C. Taylor, the county medical officer of health, who for inspectorial purposes has the assistance of two medical officers. The school population here in question does not, of course, include the boroughs of Windsor, Maidenhead, and Newbury, but the number of children on the rolls amounts to about 24,480. Dr. Taylor condemns what appears to be the usual method of dry sweeping in the schools, and he urges that damp sawdust should be scattered over the floors prior to cleansing. Much of the dust in schoolrooms is, he thinks, caused by the bad surface of the playgrounds, and he would evidently like to see more asphalting carried out. In 51 of the schools there is no supply of drinking water on the premises. As regards excrement disposal, Dr. Taylor is in favour of pail closets, to the contents of which earth is freely added. Pediculi were present in the hair of 16·5 per cent. of the children examined, a proportion which shows a decrease of nearly 6 per cent. upon the figures for last year. 57 per cent. of the children had defective teeth, and it is found to be extremely rare that any attempt at treatment has been made. Enlarged tonsils were found in 27 per cent. and adenoids in 17 per cent. It is not stated what means were adopted for ascertaining the presence of adenoids. Of the 2856 whose sight was tested, 73 per cent. had normal vision of both eyes. 4 per cent. had defective hearing, but this percentage is open to revision. 88 instances of enlarged thyroid were recorded, 22 amongst boys and 66 amongst girls, principally at the age of puberty. The available methods of treatment are thus grouped: (*a*) payment of doctors' or specialists' fees; (*b*) subscription to a provident dispensary or medical club; (*c*) a relieving officer's order; and (*d*) a recommendation for a voluntary hospital. As regards (*a*), it is pointed out that, although many of the parents are both able and willing to pay for medical attention for an acute and short illness, they are less able to do so for an operation or prolonged treatment; while with respect to (*b*) Dr. Taylor thinks that the rates of subscriptions to provident clubs do not allow of much time being devoted to individual patients. Besides, the rules but rarely include operative interference, vision-testing, or dentistry. (*c*) As to the employment of the district medical officer, Dr. Taylor observes that, although the only recognised qualification for gratuitous treatment is "destitution," it is customary in some unions to grant medical relief on loan, the case being subsequently considered by the guardians when either the loan is written off or repayment obtained. It seems that in Berkshire school medical inspection has in certain districts increased the number of applicants for medical relief, and it is regarded as unfair that the work of district medical officers should be thus augmented without a proportional increase in pay. The Poor-law Order of 1847 enables the guardians with the consent of the central authority to pay compensation for extra services, and possibly where the demand upon the time of the district medical officer has been increased some remuneration might be obtained under this provision. But, as Dr. Taylor foresees, this point raises some important general issues as to the extent to which the Poor-law authorities are prepared to extend facilities for treatment, and as to whether public opinion will permit parents to be compelled to apply for Poor-law medical relief when not otherwise in need of public assistance. With reference to (*d*)—i.e., a recommendation for a general hospital—it appears that considerable use is already made of the Royal Berkshire Hospital at Reading, the Radcliffe Infirmary at Oxford, and the King Edward VII. Hospital at Windsor, while a few of the children are brought up to the special or general hospitals in London. There are also several cottage and other hospitals in the county which are available for operations. Dr. Taylor thinks that proposals to subsidise voluntary hospitals out of the education rate are not likely to meet with general approval, since these hospitals already compete

seriously with private practice and the Poor-law medical service. There is, he adds, "a strong feeling, not confined to the medical profession, against conducting hospitals on *quasi*-charitable lines at the expense of the honorary staff and general practitioner."

The County of Essex.—There appears to have been considerable difficulty in arriving at a decision as to the best method for inspecting the school children in this administrative county, and with the delays which were occasioned no systematic inspection was undertaken before the end of January, 1909, a fact which has to be remembered in drawing any inferences from the statistics. One of the proposals was to place certain areas under the charge of local medical officers of health, while another was a further division of the county and the carrying out of inspection by local medical practitioners. Finally, Dr. J. C. Thresh, who is the school medical officer, advised the appointment of three whole-time inspectors, and this subsequently resulted in two being appointed at £250 a year each. But it soon became clear that the two inspectors could not cope with the work and a number of temporary inspectors were appointed, the services of one of these being permanently retained at the end of 1909, there thus being now three inspectors as originally advised. But Dr. Thresh thinks that a fourth inspector will soon be necessary. No school nurse has yet been appointed. Throughout the county it was found that the girls were better clothed and booted than the boys, about 3¼ per cent. of the former and and 5 per cent. of the latter being insufficiently clad or shod, or both. There are marked variations in the percentage of defects and vermin found in the different districts, and these differences are of a nature to suggest that the personal equation of the inspector may have been operative. In the table relative to cleanliness of body and head the boys at Grays showed 10 per cent. of dirty bodies, but only 3·3 per cent. of dirty heads, while amongst the girls the dirty heads in other districts were more numerous than at Grays. But the figures as regards Grays are throughout the whole inspection very remarkable, and special circumstances do seem to obtain there. Dr. Thresh asked another inspector to see the children, and he, too, pronounced that "many children are verminous from the top of their heads to the soles of their feet, their bodies smell horribly, ... and they are quite unfit to sit amongst the clean children," a condition which suggests the necessity of greater supervision by the teachers. In the matter of nutrition no less than 50·7 per cent. of the Grays boys and 40·3 per cent. of the girls were found with their nutrition below normal, these percentages in each sex being enormously above those of any other district. But another inspection showed general nutrition as distinctly bad in 26·4 per cent. of the boys and 25 per cent. of the girls, and Dr. Thresh is satisfied that in Grays and Tilbury 25 per cent. of the school children require special treatment and another 25 per cent. require more suitable food. So bad are the conditions regarded here that it is proposed to supply cod-liver oil and Parrish's food to the parents at cost price. Adenoids appear to be unduly prevalent in Essex, the children on admission showing the condition in 22·5 per cent. of the boys and 18·4 per cent. of the girls. But in this connexion it is suggestive to learn that at Grays one inspector found 20 per cent. of the children to require treatment for adenoids whereas another inspector, examining the same children, regarded 40 per cent. as requiring treatment. Dr. Thresh lays great stress upon operative treatment for adenoids, and he deplores the advice given by some practitioners in Essex to the effect that the children will gradually improve without treatment. He insists, too, that to be effective surgical treatment must be followed by breathing exercises through each nostril separately. As to the treatment of defective vision, it is of interest to hear that the county council has provided an ophthalmoscope and a box of refraction lenses, and that it is hoped that one of the inspectors will in future examine and personally prescribe glasses for selected children. Apparently, too, arrangements are being made to provide spectacles through local organisations. Some cardiac trouble was found in 1·5 per cent. of the boys and 1·1 per cent. of the girls; the amount of lung disease, exclusive of tuberculosis, was 1 per cent. in each sex. The number of children with pulmonary tuberculosis was too small to base a percentage upon. All the inspectors are unanimous as to the rarity of this disease amount school children. With respect generally to treatment, the various school managers have appointed one or more of their members to persuade and assist the parents to obtain the necessary advice, and Dr. Thresh reports that the results have been excellent. Arrangements are also being made to procure the use of an X-ray apparatus or to purchase a portable one. Dr. Thresh, who evidently thinks it wise to proceed cautiously at first, suggests that in future, when the local committees are fully aroused, the county might consider the advisability of contributing to hospitals, infirmaries, and dispensaries, and he hints at the possibility of a school clinic at Grays. There is much in Dr. Thresh's report which is worth serious consideration.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 8388 births and 4249 deaths were registered during the week ending April 30th. The annual rate of mortality in these towns, which had been equal to 15·0 and 13·7 per 1000 in the two preceding weeks, further declined to 13·1 in the week under notice, and was lower than in any previous week of this year. During the first four weeks of the current quarter the annual death-rate in these towns averaged 14·2 per 1000, and in London during the same period the rate did not exceed 13·9 per 1000. The lowest recorded annual rates of mortality during last week in these 77 towns were 5·9 in Leyton, 6·1 in Bury, 6·9 in Hornsey, and 7·2 in Willesden and in Handsworth; the rates in the other towns ranged upwards, however, to 20·6 in Oldham, 20·7 in Wallasey, 21·0 in Merthyr Tydfil, and 21·8 in Burnley. In London the recorded death-rate last week did not exceed 13·0 per 1000. The 4249 deaths registered last week in the 77 towns showed a further decline of 218 from the numbers returned in the two preceding weeks, and included 364 which were referred to the principal epidemic diseases, against 383 and 345 in the two previous weeks; of these 364 deaths, 138 resulted from whooping-cough, 115 from measles, 40 from diphtheria, 37 from diarrhœa, 20 from scarlet fever, 13 from enteric fever, and 1 from small-pox. The mean annual rate of mortality in the 77 towns last week from these epidemic diseases was equal to 1·1 per 1000, and corresponded with the rates in the previous week. No death from any of these epidemic diseases was registered last week in Cardiff, Brighton, Tottenham, Wolverhampton, or in 13 other smaller towns; the annual death-rates therefrom ranged upwards, however, to 2·7 in Liverpool, 2·8 in Warrington, 3·1 in Devonport, 3·3 in East Ham, and 7·2 in Merthyr Tydfil. The fatal cases of whooping-cough in the 77 towns, which had been 143 in each of the two preceding weeks, declined to 138 last week; they caused annual death-rates, however, equal to 1·8 in Oldham, 2·0 in Gateshead, 2·1 in Warrington, and 2·5 in Devonport. The 115 deaths from measles showed an increase of 18 upon the number in the previous week; the highest death-rates from this disease last week were 1·6 in Swansea, 1·8 in Bradford, 2·7 in East Ham, and 6·6 in Merthyr Tydfil. The 40 deaths referred to diphtheria exceeded the numbers in recent weeks, and included 13 in London and its suburban districts, 3 in Bristol, 3 in Liverpool, and 3 in Leeds. The deaths attributed to diarrhœa, which had been 34 and 40 in the two previous weeks, declined again last week to 37. The 20 fatal cases of scarlet fever were fewer than in any previous week of this year; 4 occurred in Liverpool and 2 in St. Helens. The deaths referred to enteric fever, which had been but 15 and 9 in the two previous weeks, did not exceed 13 last week, of which 3 were returned in Manchester and Salford. The fatal case of small-pox occurred in Hull. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily declined in the 28 preceding weeks from 2819 to 1510, were 1509 on April 30th; 192 new cases of this disease were admitted to these hospitals during last week, against 197 and 196 in the two preceding weeks. No case of small-pox was under treatment in these hospitals on Saturday last. Of the 1217 deaths registered in London during the week under notice 224 were referred to pneumonia and other diseases of the respiratory system, showing a further decline of 33 from the numbers returned in recent weeks; these 244 deaths were 62 below the corrected average

number in the corresponding week of the five years 1905–09. The causes of 20, or 0·5 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death registered during the week were duly certified in Manchester, Birmingham, Leeds, Sheffield, Bristol, West Ham, and in 58 other smaller towns; the 20 uncertified causes of death in the 77 towns included 3 in London and 2 each in Liverpool Blackburn, Preston, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 998 births and 630 deaths were registered during the week ending April 30th. The annual rate of mortality in these towns, which had been equal to 18·5 and 16·3 per 1000 in the two preceding weeks, rose again to 17·4 in the week under notice. During the first four weeks of the current quarter the death-rate in these towns averaged 17·6 per 1000, and exceeded by 3·4 the mean rate during the same period in the 77 largest English towns. The annual death-rates last week in these eight Scotch towns ranged from 11·7 and 13·8 in Paisley and Leith to 22·0 in Greenock and 32·8 in Dundee. The 630 deaths from all causes in the eight towns during last week showed an increase of 40 on the number in the previous week, and included 76 which were referred to the principal epidemic diseases, against 123, 97, and 87 in the three preceding weeks. These 76 deaths were equal to an annual rate of 2·1 per 1000; the mean death-rate from the same diseases in the 77 English towns last week did not exceed 1·1 per 1000. These 76 deaths in the Scotch towns last week included 44 from measles, 16 from diarrhœa, 7 from whooping-cough, 5 from scarlet fever, 2 from diphtheria, and 2 from "fever," but not one from small-pox. The fatal cases of measles in the eight towns, which had been 74, 64, and 59 in the three preceding weeks, further declined last week to 44, of which 32 occurred in Dundee, 5 in Glasgow, and 3 both in Paisley and in Greenock. The 16 deaths attributed to diarrhœa corresponded with the number in the previous week and included 7 in Glasgow, 4 in Dundee, and 2 in Aberdeen. The 7 fatal cases of whooping cough, of which 5 occurred in Glasgow and 2 in Dundee, showed a slight increase. Three of the 5 deaths from scarlet fever, and both the deaths referred to "fever," were returned in Glasgow; the two deaths from "fever" were certified as due to cerebro-spinal meningitis. The deaths in the eight towns referred to diseases of the respiratory system, which had been 126 and 92 in the two preceding weeks, were 93 in the week under notice, and were 6 below the number in the corresponding week of last year. The causes of 10, or 1·6 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 77 English towns the proportion of uncertified causes of death last week did not exceed 0·5 per cent.

HEALTH OF IRISH TOWNS.

In 22 town districts of Ireland, having an estimated population of 1,151,790 persons, 703 births and 485 deaths were registered during the week ending April 30th. The mean annual rate of mortality in these towns, which had been equal to 23·2 and 22·4 per 1000 in the two preceding weeks, further declined to 22·0 in the week under notice. During the first four weeks of the current quarter the annual death-rate in these Irish towns averaged 22·7 per 1000, whereas the mean rate during the same period did not exceed 14·2 in the 77 largest English towns, and 17·6 in the eight principal Scotch towns. The annual death-rate during last week was equal to 23·9 in Dublin (against 13·0 in London), 23·1 in Belfast, 19·9 in Cork, 20·4 in Londonderry, 19·1 in Limerick, and 23·4 in Waterford; the mean annual death-rate last week in the 16 smallest of these Irish town districts was equal to 17·0 per 1000. The 485 deaths from all causes in the 22 town districts last week showed a further decline of 9 from the numbers in the two previous weeks, and included 39 which were referred to the principal epidemic diseases, against 39 and 41 in the two preceding weeks; these 39 deaths were equal to an annual rate of 1·8 per 1000; in the 77 English towns the mean rate last week from the same diseases did not exceed 1·1 per 1000, while in the eight Scotch towns it was equal to 2·1. The 39 deaths from these diseases in the Irish towns last week included 20 from measles, 12 from whooping-cough, 4 from diarrhœa, 2 from "fever," and 1 from diphtheria, but not one either from scarlet fever or from small-pox. The fatal cases of measles in the 22 towns, which had been 17 and 9 in the two previous weeks, rose to 20 last week, all of which occurred in Belfast. The deaths from whooping-cough, which had been 9 and 17 in the two preceding weeks, declined again to 12 last week; they included 4 both in Dublin and in Belfast, and 2 in Lisburn. Both the deaths from enteric fever occurred in Dublin, and the fatal case of diphtheria in Belfast. The 4 deaths attributed to diarrhœa were fewer by 2 than the number in the previous week. The deaths in the 22 towns referred to pneumonia and other diseases of the respiratory system, which had been 129, 121, and 118 in the three preceding weeks, further declined to 96 in the week under notice. The causes of 18, or 3·7 per cent., of the deaths registered in the Irish towns last week were not certified; in the 77 English towns the proportion of uncertified causes of death last week did not exceed 0·5 per cent., and in the eight principal Scotch towns it was equal to 1·6 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff-Surgeons: R. St. G. S. Bond to the *Crescent*, temporary; R. S. Osborne to the *President*, additional, for Royal Naval College, Greenwich, temporary; A. W. B. Livesay to the *Cornwall;* E. T. P. Eames to the *Devonshire;* E. G. E. O'Leary to the *Donegal*, and as Acting Interpreter in French; and M. H. Knapp to the *Natal*, on recommissioning. Surgeons: G. R. McCowen to the *Donegal;* and J. J. H. Rooney to the *Natal*, on recommissioning.

Lieutenant-Colonel Charles L. Josling retires on retired pay (dated May 4th, 1910).

The undermentioned Captains to be Majors (dated April 27th, 1910):—George J. S. Archer, Robert Selby, Sydney O. Hall, Alfred E. Weld, James S. Gallie, Francis J. C. Hefferman, Arthur E. Thorp, Henry Herrick, James Cowan, Austin R. O'Flaherty, Henry B. G. Walton, and Edmund P. Hewitt.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel W. Caton Jones, in charge of the Military Hospital at Colchester, has been posted to Tidworth. Lieutenant-Colonel P. C. H. Gordon, from Rangoon, has been appointed to Bulford Camp, Salisbury Plain. Lieutenant-Colonel H. J. Fletcher, from Sialkot, has been transferred to Rawal Pindi. Major M. M. Lowsley has been appointed a Specialist in Midwifery and Diseases of Women and Children to the Third (Lahore) Division. Major C. W. R. Healey has been appointed to command the Station Hospital at Nasirabad. Major A. J. Luther, from Burma, has been posted to the Cork District for duty at Cahir. Major C. H. Hale, D.S.O., has been transferred from York to Stensail. Major B. H. Scott, from Edinburgh, has joined the London District for special duty at the War Office. Major T. B. Beach has been transferred from the Woolwich District to the Aldershot Command. Captain H. B. Connell has embarked for a tour of service on the West Coast of Africa. Captain P. Farrant, from Jamaica, has been posted to Birmingham. Captain T. Scatchard, on completion of a course of instruction at the X Ray Institute at Dehra Dun, has been posted to Agra. Captain W. Wiley, from Bangalore, has joined the Royal Victoria Hospital, Netley, for duty. Captain A. M. Rose, from Bermuda, has been posted to Aldershot. Captain G. Ormrod has been transferred from Landour to Roorkee, and Captain L. V. Thurston, from Nowshera, to Peshawar. Captain F. D. G. Howell, attached to the Lancashire Fusiliers on special duty in connexion with anti-typhoid inoculations, has been transferred with the battalion from Chakrata to Multan. Lieutenant D. S. Buist, from Woolwich, has been posted to Kingston-on-Thames.

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions of officers of the Indian Medical Service:—To be Colonels: Lieutenant-Colonel Thomas Grainger (dated Dec. 3rd, 1909) and Lieutenant-Colonel George Francis Angelo Harris (dated March 1st, 1910). Captains to be Majors: Godfrey Tate, Roy Fearon Baird, Andrew Thomas

Gage, George McPherson, Alfred George Sargent, Walter Hubert Cox, D.S.O., de Vere Condon, Henry Kirkpatrick, Frederick Durand Sterling Fayrer, Padmakar Krishna Chitale, William Lethbridge, Thomas Hunter, Walter Rothney Battye, George Hutcheson, William Glen Liston, Harold Boulton, Richard William Anthony, Ernest Frederick Gordon Tucker, George Edward Stewart, Frank Stuart Corbitt Thompson, and John William Watson (dated Jan. 28th, 1910). Lieutenants to be Captains: Harold Hay Thorburn (dated Sept. 1st, 1909); Norman Niel George Cowan McVean, Robert Francis Hebbert, James Smalley, William Malcolm Thompson, Francis Hugh Salisbury, and Frederick Charles Fraser (dated Oct. 4th, 1909); Owen Alfred Rowland Berkeley-Hill, Walter Lidwell Harnett, John Drummond Sandes, William Percival Gould Williams, Siavax Byramjee Mehta, Alexander Harper Napier, Gilbert Holroyd, Arnold Egbert Grisewood, David Livingstone Graham, Pheraya Kharsedji Tarapore, Roger Brighouse Nicholson, George Staunton Husband, James Alexander Cruikshank, John Alfred Steele Phillips, Dwarkanath Dharmaji Kamat, Ernest David Simson, Alexander Frederick Babonau, and Patrick Manson Rennie (dated Feb. 2nd, 1910).

The provisional promotion of Lieutenant Joseph Frain James to the rank of Captain is cancelled.

His Majesty has also approved of the following retirements: Colonel Henry Kellock McKay, C.B., C.I.E. (dated Dec. 3rd, 1909); Lieutenant-Colonel Arthur Bown and Lieutenant-Colonel Joseph Sykes (dated Dec. 14th, 1909); Lieutenant-Colonel William Henry Burke (dated Jan. 1st, 1910); Lieutenant-Colonel James Cort Marsden (dated Feb. 10th, 1910); Colonel Roderick Macrae (dated March 1st, 1910); Colonel Robert Davidson Murray (dated March 29th, 1910); and Lieutenant-Colonel John Anderson and Lieutenant-Colonel George Hart Desmond Gimlette, C.I.E. (dated April 1st, 1910).

Lieutenant-Colonel E. P. Frenchman, Inspector-General of the Jail Department in Burma, has been permitted to retire from April 4th. Lieutenant-Colonel C. E. Sunder has been appointed civil surgeon at Patna, vice Major B. Oldham, appointed to the medical charge of the 24th Pergunnas at Alipore. Lieutenant-Colonel J. K. Close, civil surgeon at Bahraich, has been transferred to Benares, vice Major J. M. Crawford, granted leave. Major R. Heard, late civil surgeon of Simla, has been appointed Professor of Midwifery at the Medical College, Lahore. Major J. W. F. Rait officiates as civil surgeon, Hooghly, during the absence on leave of Lieutenant-Colonel C. M. Crawford. The services of Major F. O. Kinealy, 24th Pergunnas, have been placed at the disposal of the Home Department of the Government of India during his employment as civil surgeon of Simla. Major C. Milne, civil surgeon, Gorakhpur, has been granted 17 months' leave from India. Major H. Bennett has been appointed to officiate as civil surgeon of Ahmedabad during the absence on leave of Major T. Jackson. Captain W. S. McGillivray has been granted 18 months' combined leave from India. Captain E. C. Hepper has been appointed to officiate as civil surgeon, Bahraich, vice Lieutenant-Colonel J. K. Close. The services of Captain E. C. Taylor have been placed at the disposal of the Foreign Department for civil employment in the North-West Frontier Province. Captain W. Lapsley has been transferred from Jaunpur to Azamgarh, vice Major W. Selby. Captain W. T. McCowen has had his leave extended by six months on medical certificate. Captain A. W. Overbeck-Wright has been appointed to the charge of the Central Jail at Dacca during the absence on leave of Major E. R. Parry. The services of Captain J. J. Urwin has been permanently placed at the disposal of the Government of Bengal. Captain C. W. F. Melville, Allahabad Brigade, has been granted 18 months' leave. Captain J. H. Burgess has arrived home on leave from India. Lieutenant W. D. Keyworth, in medical charge of the 9th Hodson's Horse at Cawnpore, has been transferred to the officiating medical charge of the 7th Rajputs at Dinapore.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Edward Torriano Holland to be Lieutenant (on probation), (dated March 28th, 1910).

TERRITORIAL FORCE.

Royal Army Medical Corps.

2nd Wessex Field Ambulance: Major Alfred B. Soltau to be Lieutenant-Colonel (dated April 1st, 1910).

1st Northern General Hospital: Frederick Charles Pybus to be Captain, whose services will be available on mobilisation (dated March 17th, 1910).

For attachment to Units other than Medical Units.—Robert Neilson Wallace to be Lieutenant (dated March 19th, 1910).

Attached to Units other than Medical Units.—Lieutenant John McWatt resigns his commission (dated Feb. 23rd, 1910).

Captain Thomas Evelyn Fielding, R.A.M.C., to be an Adjutant of a School of Instruction (dated April 2nd, 1910).

DEATHS IN THE SERVICES.

Lieutenant-Colonel Claude Stephen Sparkes, R.A.M.C., at the Cambridge Hospital, Aldershot, on April 23rd, aged 51. He entered the service as surgeon in 1885, was promoted surgeon-major in 1897, and reached the rank of lieutenant-colonel in 1905. He served with the Sikkim Expedition of 1888, including the engagement at Kotkai (medal with clasp), and in 1902 he took part in the operations in the Transvaal, in the Orange River Colony, and in Cape Colony (Queen's medal with four clasps).

THE UNVERSITY OF LONDON OFFICERS' TRAINING CORPS.

A full parade of the Officers' Training Corps will be held on Presentation Day at the University of London, which has been fixed for May 18th. Some 860 cadets and 30 officers will attend, and at the conclusion of the Presentation Day ceremonies the contingent will march past the Chancellor and the members of the Senate. At 6 P.M. a service will be held in Westminster Abbey, when the Dean of Westminster will preach the sermon, and at 7.30 P.M. the members of the Officers' Training Corps will dine together at Victoria Station Restaurant.

THE BRITISH RED CROSS SOCIETY.

On May 2nd the Lady Mayoress of the City of London presided at the Mansion House over a meeting convened in furtherance of the City of London Branch of the Red Cross Society. The Lady Mayoress explained that ten voluntary detachments for men and ten for women would probably be formed, and that steps would be taken for expanding the general hospitals and establishing convalescent homes. Representatives of large business establishments promised to bring the subject before their employees and expressed their intention of establishing classes and affording facilities for lectures on their premises.

The Mayor of Lewes, Alderman G. Holman, presided over a meeting at the Lewes Town-hall on April 26th, which was convened under the auspices of the local division of the Sussex Branch of the Red Cross Society. The advantages of field-training were pointed out and the suggestion that a camp should be started in the summer was favourably received.

The first Voluntary Aid Detachment in Cornwall has been formed at Portleven. Mr. H. W. Spaight, L.R.C.P., L.R.C.S. Irel., the commandant, has raised a full detachment of 24 members.

Mr. J. S. C. Davis, the county director of the Devonshire Voluntary Aid Organisation, has issued a little "Handbook for Workers," which explains the aims and objects of the society, and gives information as to recruiting, conditions of service, details regarding equipment, and so forth.

THE ROYAL SANITARY INSTITUTE.—A sessional meeting of the institute will be held in Hereford on Friday, May 27th. The members will meet at the town-hall, Hereford, at 3 P.M. and proceed to visit the Hereford Garden City and Messrs. Godwin and Thynnes' Encaustic Tile Works. At 5 P.M. discussions will take place in the town-hall as follows:—Country Schools, Disposal of Refuse Matter, to be opened by Dr. D. D. Gold, D.P.H., medical officer of health of Herefordshire; Road Tarring in Districts of Small Rateable Value, to be opened by Mr. R. G. Gurney, P.A.S.I., surveyor to the Ledbury urban district council; Storage, Filtration, and Other Methods of Purification on a Large Scale of River Water used for Drinking Purposes, to be opened by Dr. J. W. Miller, D.P.H., medical officer of health of Hereford City. The chair will be taken at 5 P.M. by Mr. H. D. Searles-Wood, F.R.I.B.A., chairman of the council of the institute. Tickets for admission of visitors may be had on application to Mr. G. H. Jack, C.E., county surveyor and architect, Hereford, who is acting as the local honorary secretary of the meeting, and of Mr. E. White Wallis, secretary.

Correspondence.

"Audi alteram partem."

THE CONSTITUTION OF THE PRISON COMMISSION.

To the Editor of THE LANCET.

SIR,—With reference to your leading article on the Prison Commission in your last issue I beg to be allowed to state the following facts.

On the occasion of my retirement from the office of Commissioner of Prisons last February I had the honour to be asked by the Home Secretary whether I would continue my services, in so far as they were of a medical nature, for a term of five years. On my acceptance of this proposal Lord Gladstone appointed me medical adviser to the Prison Commissioners, and also Director of Convict Prisons, with a seat and voice at the Prisons Board such as I have had ever since my first appointment as Commissioner.

The medical work which now devolves upon me is the same, both in nature and quantity, as that which I have always hitherto carried out. This work occupied in the past little more than one-sixth of the time I devoted to my official duties; it now occupies about two half-days a week, besides causing a fluctuating amount of correspondence. Having now, however, more time at my own disposal, I am able to give voluntarily more attention to any important general question that may arise affecting the medical side of prison work.

I am, Sir, yours faithfully,

Portland-place, W., May 2nd, 1910. H. B. DONKIN.

*** We are glad to learn that Dr. Donkin's position at the Prisons Board in respect of seat and voice is unaltered. We are sure that the Board for the time being gains by receiving medical services from him, while he is unfettered by other official duties. But we regret the exclusion from the Board of a full Commissioner who is also a medical man.—ED. L.

MR. LITTLEWOOD'S METHOD OF PERFORMING THE INTERSCAPULO-THORACIC AMPUTATION.

To the Editor of THE LANCET.

SIR,—The interest which will be aroused by Mr. C. B. Lockwood's paper in THE LANCET of April 30th upon amputations at the hip and shoulder induces me to draw attention to a method of performing the interscapulo-thoracic amputation which owes its inception to my colleague, Mr. H. Littlewood. Instead of carrying out the amputation from the front and tying the vessels as soon as the clavicle has been divided, Mr. Littlewood performed the operation from behind and divided the vessels last. Shortly described, the operation was begun by the usual skin incisions and division of the clavicle. Then the operator, standing behind the patient, reflected the posterior flap sufficiently to expose the muscles inserted into the posterior border of the scapula. These muscles were raised upon the finger and divided with scissors, and near the upper angle the posterior scapular artery was divided and clipped at once. As the scapula was dragged away from the thorax by the assistant, who held the arm, the trapezius was put on the stretch and divided, the omohyoid was cut, and the suprascapular vessels were secured, before division, as they ran to the notch. The large nerves and the vessels now stood out as a big cord. The former were divided, and as they started apart the white artery was exposed for a considerable length. It was divided between two clips, and then the vein was exposed and similarly dealt with. A few cuts of the knife severed the pectorales major and minor, the latissimus dorsi, and the serratus magnus, and completed the amputation.

There can, I think, be no question that performed in this way the interscapulo-thoracic amputation is a much simpler operation than that associated with Berger's name. The real difficulty of Berger's operation lies in the preliminary ligature of the vessels after division of the clavicle. In a muscular or a short-necked patient they may lie at a considerable depth, and before they are satisfactorily exposed a good deal of bleeding may take place. Moreover, the position of the vein in front of the artery may add very considerably to the difficulty of tying the artery first; whilst if the axilla is filled up by a large tumour pressing forwards the pectorals and increasing the vascularity of the soft parts in the neighbourhood—a not uncommon condition where this amputation is called for—the difficulty becomes formidable.[1] But by Mr. Littlewood's method there is *no* difficulty in dealing with the vessels. They present themselves to the operator in the right order without any need for careful dissection and at the close of an operation which except for the skin incision might almost be considered bloodless. I have had experience of both methods and the amount of blood lost in the posterior operation is decidedly less than in the anterior.

Another point that has a bearing upon the shock is the time occupied. Mr. Littlewood's method is much more speedy. Roughly, I would say that it takes half or at most two-thirds of the time required for a Berger's amputation. I have always been astonished at the small amount of shock that follows this big amputation. Of the four cases I have had, in not one was there the least need for transfusion, and of the three that were done for growth the rapidity of recovery after the operation was striking. No doubt this is due, as Mr. Lockwood points out, to prevention of loss of blood, but this object is just as well secured by Mr. Littlewood's method as by M. Berger's. To those who have tried both plans the posterior operation will, I feel sure, be much preferred, and I have very little doubt that in due time it will become the operation of choice. Mr. Littlewood has shown so little disposition to publish much of his good work that I have sought his permission to rescue this little portion of it from oblivion—partly from a feeling of loyalty to a friend, and partly because there are many surgeons who I am sure will be glad to know of it.

I am, Sir, yours faithfully,

Leeds, May 2nd, 1910. R. LAWFORD KNAGGS.

A DISCLAIMER.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Oct. 12th, 1907, pp. 1011 *et seq.*, an article was published on a surgical instrument types of which have been in universal use for some 30 years or more. The article dealt with my attempt to construct an instrument which should combine the advantages of most of the types then in use. Although the matter is an experimental one, and consequently certain small but essential measurements in my instrument have since been altered chiefly at the representation of friends, the main type remains the same, and the original makers (A) have now stamped its measurements and design for purposes of reproduction by means of certain bosses and templets in their possession. In the experimental stages of the work they devoted much time, skill, patience and money to the subject for which they might reasonably expect some return. Now the originator of any instrument in surgery does not by the etiquette of his profession patent his invention, neither does he make a penny out of it. He places it at the disposal of the profession and if they back him up in the matter, as to a large extent they do and as I think they should do, they will insist on having the actual article made by the original maker, thereby enabling him to recoup himself. Unless this is done there is no incentive to progress, because it is a losing game from the instrument maker's point of view. At the same time it is recognised that the surgeon should not advertise the firm of instrument makers. The question arises, "Can the originator's name under these circumstances be regarded as a trade description or can it not?" If the design is registered or patented I believe it can, and as such it could be infringed, but if not, I believe, strictly speaking, it cannot.

It has come to my knowledge that recently another large and respected firm of instrument makers (B) have sent a traveller round the West of England, and doubtless by now to other districts too, showing an instrument with my name

[1] Vide a most instructing footnote, Jacobson and Rowlands's Operations of Surgery, vol. i., p. 225.

attached to it as a trade description. I have examined and measured this pattern of instrument. In the main essential it is 66 per cent. wrong, and this affects two other important factors in the design to the extent of 40 per cent. and 20 per cent. respectively. In one other essential particular it is radically wrong and in five others partially so. In general finish and in several small details it differs from the original. The price is 30 per cent. less. This firm is not the only one which has "pirated" in this manner. At least one other firm (C) has produced an imitation—in fact a much better one—of my instrument that they sell at half the price of the original pattern. Towards the end of last year I wrote to this firm and said that if they sold the instrument as my design they must take steps to guarantee its being exact in every particular otherwise my name must be omitted from all their descriptions. They replied that they would omit my name from their catalogue and advertisements. I also said that in any case I would on no consideration whatever authorise more than one firm as a manufacturer of any instrument designed by me.

That a great injustice is done to at least two parties by this state of affairs is clear. The question arises as to whether it can be remedied. If the instrument makers themselves would agree to be agents for one another, I believe there would not be any great difficulty. Incidentally I must dissociate myself entirely from any responsibility as to design, measurement, material or method of manufacture in the case of any instrument or appliance bearing my name unless it is made by the firm which I may employ in the first instance. Inasmuch as a scheme is now being tested which, if the results are good, will be worked up into a practical form, I am anxious that this question should be raised and, if possible, fully ventilated.

This letter is entirely disinterested.

I am, Sir, yours faithfully,

April 28th, 1910. G. H. COLT.

THE MIDWIVES BILL AND POOR-LAW RELIEF.

To the Editor of THE LANCET.

SIR,—So far as they are concerned, I do not think that medical practitioners will much care what authority pays the fee, so long as a proper payment is guaranteed. Mrs. Sidney Webb's objection to these fees being paid by the guardians appears to me based on slender foundations. All services given gratuitously by the State on account of the poverty of the recipients are pauperising and tend to destroy the independence of the individual, whether given by the guardians or by any other local authority, and for that reason will always carry some stigma with them. The object of the present Bill is to enable poor lying-in women, otherwise unable to get medical assistance without delay at critical periods, to obtain the prompt attendance of a medical practitioner when summoned by a midwife in charge. This is impossible unless a proper fee is guaranteed, and regarding the analogy of this kind of relief with ordinary Poor-law relief it might be considered that the proper authority to pay these fees would be a Poor-law authority. It might be thought from Mrs. Webb's letter that this Bill proposed to grant to all lying-in women in charge of midwives a right to medical attendance in the case of emergencies at the cost of the State, irrespective of their ability to pay. But its object is only to furnish this assistance when the patient's husband cannot defray the cost. If there is to be no inquiry into the circumstances of the patient and no attempt to recover the cost from those able to pay, it would soon result that all employing midwives instead of doctors would be guaranteed free medical aid in emergencies, and the little midwifery practice still in the hands of the latter would be further jeopardised. Mrs. Webb's desire that these fees should be paid by authorities who have no machinery for investigating the means of those claiming them certainly does support Mr. Fremantle's contention, that she wishes for no inquiries of any kind; that she is in favour of the State paying the doctor's fee, whatever may be the financial position of the patient's husband; and in this she will get little professional sympathy. The question of deterring deserving applicants by reason of inquiry into their means does not arise in these cases. The midwife for her own sake, and without consulting the patient, must always call in the doctor or be guilty of neglect of duty. Neither is there any cogency in the quotation from the report of a midwives' meeting. What the midwives complain of is officiousness on the part of the relieving officer. In order to carry out necessary inquiries there could be no need to make the visits complained of till after the patient was out of all risk of danger. Such abuses might easily be checked if public attention were drawn to them. I confess I am unable to see any analogy between emergencies in the course of parturition and street accidents, and I also fail to follow Mrs. Webb in some of the points she would appear to make—e.g., what does she mean by the following: "Because the board of guardians has chosen to pay (not to them) a fee to a doctor, whom Parliament (not they) has chosen to have called in." If the neighbour of a poor person taken in labour without her consent applies to the Poor-law authorities for aid, and the Poor-law doctor is duly sent for and afterwards receives his fee from the guardians, it appears to me there is a striking parallel between such a case and that quoted by Mrs. Webb. The volition of the patient in each case may be practically the same, and in each case the guardians will be acting under statutory obligations. I quite fail to see the importance of anything that Mrs. Webb has proved by this illustration. The woman requires medical aid, and is unable to pay for it; it is therefore supplied by the State without any regard to her volition in the matter.

I am, Sir, yours faithfully,

MAJOR GREENWOOD,
Honorary Secretary, Poor-law Medical Officers' Association of England and Wales.

London, E.C., April 23rd, 1910.

A QUESTION OF MEDICAL CERTIFICATES.

To the Editor of THE LANCET.

SIR,—My literary avocations having taken me into other fields of work for a good many years now I have got a little out of touch with the general pulse of the profession, and therefore should be very glad of your opinion on a point that strikes me, in my semi-retirement, as affecting the very heart of its civic repute. It is this: Should any corporation be allowed to discriminate between one duly qualified medical man and another in the matter of certificates of illness? and is it consistent with professional etiquette for a medical man, however distinguished, to examine a patient by order of such a corporation after that patient has already obtained from his own medical attendant a certificate that he is temporarily unfit for duty?

That point has been presented to my mind in this way. Taking some active interest (as a mere humble ratepayer) in the municipal orchestra started about two years ago by the Brighton town council, last summer I had occasion to study the contracts of agreement between our musical director and the instrumentalists he is deputed to engage. In the said contracts for the current year I was amazed to find a brand-new clause, laying it down that "illness will not necessarily be deemed a satisfactory reason for absence unless certified to be such by a medical certificate given by the medical officer of health for Brighton or some other medical practitioner nominated by the corporation for the purpose." To my old-fashioned notions this stipulation seemed so gross an insult to the whole profession that I believed no official would ever dare enforce it; but I was mistaken. Last week a member of our municipal orchestra sent in to the musical director a certificate from a duly qualified medical man in general practice that he was unable to return to work for the time being; next morning he received from the medical officer of health the following letter, posted the night before: "I have been asked by the town clerk to call upon you to-morrow forenoon in order that I may give him a certificate as to your present illness.—I am, yours faithfully, &c."

I ought to mention that before actually paying that call the medical officer of health apprised the instrumentalist's own medical attendant by telephone that he had been requested to do so. But I should like to hear your public opinion, as said, on what appears to myself not only a serious hardship (by no means the sole one in these contracts) to our employees, but also a slur on the profession at large.

I am, Sir, yours faithfully,

WM. ASHTON ELLIS, M.R.C.S. Eng., L.R.C.P. Lond.

Brighton, April 25th, 1910.

*** We consider the stipulation that these sick certificates should hold good only if signed by the medical officer of

health or some medical man nominated by the corporation to be an unfortunate one. There is no infringement of ethical principle in the medical officer of health obeying the instructions of his authority, and the appearance of such is removed if the private practitioner is duly communicated with by this public officer. If another private practitioner is instructed to supervise a colleague's certificate he will be well advised to refuse. The regulation looks to us like an imputation upon both the practitioner and his patient, and the corporation ought to be able to deal with suspected malingering in a more satisfactory manner.—ED. L.

FEMALE HÆMOPHILIACS AND *DE NOVO* CASES OF HÆMOPHILIA.

To the Editor of THE LANCET.

SIR,—Professor Osler's admission that he derived pleasure from kissing the chastening rod reflects as much honour on himself as upon the chastiser. I must, however, disclaim membership of the "new iatro-mathematical school." I have often wondered whether any individual has been created with a more rudimentary mathematical centre than myself. My record in mathematics is black. I can, indeed, never efface from my memory a painful communication I received from the Senatus Academicus of the University of Aberdeen after I had stood for my *preliminary* medical examination. It was not like a Foreign Office communication. There was no mistaking its purport. It bore the simple words, "Rejected in algebra."

My endeavour has been to collect and sift the observations on hæmophilia in order to present to the mathematical school a collection of homogeneous iatric data. If "biting Boreas" was let loose it was only because the logician teaches us that "the assertion of a fact wholly beyond the reach of evidence for or against is to be held as untrue" as far as the collection of positive data is concerned. All I asked for was *evidence* of hæmophilia in females, and the evidence must be of a very convincing nature before the existence of such a condition can be held as proved. As Professor Osler suspects, I am not convinced by his account of the girl, nor apparently is Professor Osler himself. "We are not obliged to show that a thing is not; the burden lies upon whoever maintains that the thing is."[1]

I am, Sir, yours faithfully,

London, E., May 2nd, 1910. WILLIAM BULLOCH.

A SCIENTIFIC REPORT AND AN EXPLANATION.

To the Editor of THE LANCET.

SIR,—We recently published in a circular letter to the medical profession, and also in pamphlet form, a report which we had obtained from Dr. E. E. Klein with reference to our oatmeal stout. When we obtained this report we assumed that we were at liberty to publish it in any form which we chose, but Dr. Klein did not understand that we were intending to use it for advertising purposes. Having regard to Dr. Klein's position in his profession, we think it fair to him to make this explanation and to indicate that the publication was made under a misapprehension.

Yours truly,

Croydon. A. C. S. & H. CROWLEY.

[1] Bain: Logic, Induction, 1873, p. 152.

DONATIONS AND BEQUESTS.—Under the will of the late Miss Elizabeth A. Winckley of Leigh, Lancashire, the Leigh Infirmary will receive £1000.—By the will of the late Sir Walter Scott, Bart., the Home for Crippled Children, Gosforth, and the Northern Counties Orphan Institution for the Deaf and Dumb will each receive £250; the Fleming Memorial Hospital for Sick Children, Newcastle-on-Tyne, will receive £500; and the Royal Infirmary, Newcastle-on-Tyne, £1000.

SANITARY BULLETIN FROM THE NEAR EAST.

(BY THE BRITISH DELEGATE ON THE CONSTANTINOPLE BOARD OF HEALTH.)

Plague in Jeddah.

THE outbreak of plague in Jeddah has taken on a considerable extension in the last few weeks. The following figures are in continuation of those published in my last letter (THE LANCET, March 26th, p. 891):—

Week	ending	Feb.	20th,	0	cases,	0	deaths.
,,	,,	,,	27th,	3	,,	3	,,
,,	,,	March	6th,	12	,,	12	,,
,,	,,	,,	13th,	6	,,	6	,,
,,	,,	,,	20th,	11	,,	10	,,
,,	,,	,,	27th,	10	,,	10	,,
,,	,,	April	3rd,	18	,,	18	,,
,,	,,	,,	10th,	12	,,	13	,,

The total number of cases since the beginning of this year's outbreak has been 77 and of deaths 76. It is probable that these figures are below the truth, as there has always been difficulty in obtaining knowledge of the cases; and this is further shown by the fact that all but one of the known cases have ended in death (or been discovered only after death), thus showing that practically none of the slighter cases come to the knowledge of the authorities. This is the fifth consecutive year in which plague has become epidemic in Jeddah. In 1906 the outbreak lasted from May 29th to July 27th, and there were recorded 72 cases and as many deaths; in 1907 the outbreak lasted from Jan. 8th to May 30th, and there were 365 cases with 354 deaths; in 1908 the epidemic began on Jan. 14th and ended on March 30th, 71 cases with 68 deaths being recorded; and, finally, in 1909, the outbreak (which began on Dec. 16th, 1908) lasted until April 21st, and 178 cases with 160 deaths were reported. With the approach of the summer season it may be expected that the present outbreak will soon begin to decline. At the moment of writing, news has been received that the acting sanitary officer of Jeddah has himself unfortunately contracted the disease. He had been occupied in a bacteriological study of the disease, but it is not yet known whether this is a case of "laboratory plague," or whether he contracted the infection in the ordinary way.

One fatal case of plague was reported from Mecca, on March 12th; details are lacking, but presumably the case was imported from Jeddah.

Plague at Bushire.

Three cases of plague were recently reported from Bushire, in the Persian Gulf; here also details are lacking. One telegram suggests that the infection came from the Bahrein Islands, but no news has been received of the presence of the disease there.

Plague in Beirût.

For some years past occasional sporadic cases of plague have been reported from time to time as occurring in Beirût. On the last occasion (in November last)[1] three such cases occurred. On the 8th of the present month news was received of another case, pneumonic in character; the patient, a girl aged 19 years, belonged to the staff of a travelling circus, which had come to Beirût from Smyrna. Shortly before two deaths had occurred among the staff of this circus; the first was that of a girl aged 15 years, who died after half an hour's illness that began during her gymnastic exercises; the second was that of a child a few months old, who died after 24 hours' illness, with some suspicious symptoms. In the former case, according to a later telegram, death was due to heart disease. The pneumonic patient died in the French hospital in Beirût. The circus has been removed outside the town and other measures have been taken.

Plague in the Kirghiz Steppes.

The latest news from these endemic plague centres is as follows. In the camp of Bodai (Astrakhan government), between Feb. 11th (24th) and 16th (March 1st), 12 new

[1] See THE LANCET, Dec. 18th, 1909, p. 1859.

cases were seen; 2 patients recovered and 14 deaths occurred; the totals from the beginning of the outbreak here had been 23 known cases and 31 deaths. At Novaia Kazanka, in the Kirghiz steppes, 5 cases and 5 deaths were recorded between Feb. 12th (25th) and 18th (March 3rd); the totals here since the outbreak began on Feb. 7th (20th) had been 13 cases, with 11 deaths.

The Recent Pilgrim Season at Camaran.

The pilgrimage of 1909–10 was very numerously attended. So far as concerns the lazaret of Camaran (at the south end of the Red Sea) it was the third largest pilgrimage since that institution came into existence nearly 30 years ago. The largest known Haj in that period was that of 1906–07 when 44,333 pilgrims passed through the lazaret; the second was that of 1907–08 when the pilgrims numbered 37,750; and the third, that of 1909–10, in which the lazaret received 36,361 pilgrims. In the year 1908–09 the corresponding figure was only 30,675. It is of interest to note that of the 36,361 pilgrims who arrived at Camaran this year, 35,588 were carried by steamers and only 772 by sailing ships. Of the steamers, which numbered 44, 33 were under the British flag, and these carried 27,482 pilgrims, or 77 per cent. of the whole. The largest number of pilgrims on any single ship was 1459. Of the whole 36,361 pilgrims, 17,305, or nearly half the total number, were Indians; 10,382 were from the Dutch East Indies; 2439 from the Malay Peninsula; 1605 were Afghans; 1089 from Irak Arabi (the regions to the north of the Persian Gulf); no other race furnished a figure exceeding a thousand. The period of quarantine varied from 24 hours to 7 days, the latter being the maximum now imposed on arrivals from Indian ports (provided, that is, that no case of plague or cholera has actually occurred on board; should such cases occur the quarantine is raised to 10 days).

The season at Camaran was a relatively healthy one. During the voyage to the island 140 deaths had occurred on the various ships, 54 in number, above referred to. Most of these deaths were ascribed to "exhaustion and debility" (77 in number); 13 were due to "syncope," 12 to "malaria," and the rest to various other diseases. During the stay of the pilgrims in the lazaret 290 patients were admitted to hospital, and of these 149 died. Malaria was the predominating disease (with 111 cases and 49 deaths), and next in order of frequency "exhaustion and debility" (with 61 cases and 45 deaths); respiratory disease accounted for 55 cases and 38 deaths; and diseases of the alimentary canal for 36 cases and 6 deaths. All these last occurred in the month of Ramazan and appeared to have been caused by the sudden change of *régime* in that month of fasting and feasting. No case or suspected case of plague or cholera was observed.

It will be recalled that early last year a new system of excreta disposal was introduced in one of the "cordons" at this lazaret. The past season was the first complete season in which the new system had been under trial. The cordon in question was purposely occupied throughout the entire season so as to put it to as thorough a test as possible. Pilgrims from 13 ships, numbering 11,842 in all, were interned successively in this cordon. The cordon was occupied during 55 days. In spite of this severe test, the new system (the nature of which was described in THE LANCET of June 1st, 1907, p. 1521) has given most satisfactory results. The director of the lazaret, in his annual report, makes the following calculation. Allowing 150 grammes of solid matter, and the small amount of one litre of urine per pilgrim per day, he estimates that 1776 kilogrammes (over 1¾ tons) of solid matter and 11,842 litres (nearly 12 fluid tons) of urine entered the "*fosses à fond perdu*" to which the contents of the trough closets are conducted. In addition the eight flushing tanks of 40 gallons each being set to go off every two hours, some 1450 litres of water per day also entered the "*fosses*." As the cordon was occupied during 55 days no less than 828,740 litres (over 828 fluid tons) of mixed water and sewage matter had to be disposed of. This enormous quantity was easily absorbed by the "*fosses*." In concluding his report on this question the director states that, in his opinion, the problem of the disposal of excreta in the Camaran lazaret—a problem which has given more trouble than any other since the lazaret was created—may be considered henceforth as satisfactorily solved.

Constantinople, April 15th.

THE GERMAN SURGICAL CONGRESS.

(FROM OUR BERLIN CORRESPONDENT.)

THE annual congress of the German Surgical Association was held in Berlin from March 30th to April 2nd, Professor BIER (Berlin) being in the chair.

Operations on the Brain.

Professor KRAUSE (Berlin) read a paper on Operations for Non-Traumatic Epilepsy. He said that he had operated during the past eight years upon 80 epileptic patients, of whom 50 suffered from Jacksonian epilepsy and 30 from general epilepsy. When the disease was of toxic origin, as in cases of lead poisoning, or was due to some acute infectious disease or to hysteria there was, of course, no indication for surgical intervention. The operable cases were those in which the epilepsy was produced by a growth or as a sequel of infantile paralysis. There were, moreover, cases in which the cause could not be found, and in which a certain predisposition to epilepsy must be assumed to exist. The operation was especially successful in the first category when no cerebral pressure and no "Ausfall" symptoms were present. With respect to the second category, he said that the epileptic fits might occur very late after the primary disease, even at intervals varying from 4 to 20 years. In every instance the cerebral centre for those muscles which were the first affected by the fit must be removed. To find the respective motor regions the faradic current must be applied to the cortex after the latter had been made accessible by trephining, localisation by mere observation being impossible. Professor Krause recommended for the faradic irritation long and fine electrodes; the current must of course be very weak, so weak that when applied to the tongue it must not cause muscular contractions but only a prickling sensation. He found, in accordance with the experiments of Professor Hitzig and Professor Sherrington, that only the central lobe was stimulated by the faradic current. By irritating certain points of the central gyrus he could ascertain three motor regions respectively for the upper and for the lower extremity and for the neck. When the motor centre was found excision was performed, the field of operation in certain cases extending over an area of 26 by 30 millimetres and reaching down to the white substance. Paresis of the speech centre might sometimes occur, but usually disappeared very soon. Professor Krause obtained five complete recoveries and in many instances considerable improvement. In general epilepsy the results were less favourable, as of 30 cases only one patient was considerably improved, three were somewhat improved, and the remainder were unchanged. He generally made a valvular opening, according to the procedure described by Professor Kocher of Berne, in order to lessen the intracranial pressure. Notwithstanding the unfavourable nature of the results in general epilepsy, he recommended the operation in cases where internal treatment has proved useless.

Professor TILMANN (Cologne) discussed the question of operations for traumatic epilepsy. He said that the traumatic origin of epilepsy was sometimes doubtful in cases where the fits occurred only some years after the accidents. It was of the greatest importance that in the treatment of injuries of the skull the possible occurrence of post-traumatic epilepsy should from the beginning be kept in mind. Primary trephining was therefore often to be recommended. Of 300 cases described in medical literature no trephining had been performed in 291. He had himself operated on 20 cases. In 50 per cent. there were an abnormal tension of the dura mater, œdema of the pia mater, and sometimes scars and concretions. In a second series of cases cysts were present, and sometimes periostitis and exostosis. There was only one instance in which the examination proved negative. An operation was always indicated in these cases. The skull must be opened at the place of the injury; the scars, concretions, and cysts must be removed, and œdematous fluid must be evacuated by puncture. In Professor Tilmann's opinion a single complete operation was preferable to one performed in successive stages. In 20 cases he had 12 recoveries, 1 case of improvement, and 1 death; 4 cases were not improved and 2 were still under treatment.

Professor FRIEDRICH (Marburg) reported the results of 25

cases operated on by him during the last 11 years. He divided the cases into three groups. The first group included 11 cases in which the operation had been performed from 7 to 11 years ago. One patient recovered completely, one recovered with slight attacks of temporary loss of consciousness, three were improved, and the remainder were not improved. In the second group, consisting of 6 cases operated on from three to seven years ago, 2 patients recovered, 1 was improved, and the others were unchanged. The third group consisted of patients operated on during the past three years; 2 of them recovered, 1 was improved, and the remainder were unchanged.

Professor GARRÉ (Bonn) uttered a warning against too frequent and too early operation for genuine epilepsy; he said that such operations were justifiable only in cases in which internal treatment had absolutely failed.

Dr. HESSE (Stettin) emphasised the value of the puncture of the brain devised by Dr. Neisser and Dr. Pollak. He said that it was indicated for hæmatoma after severe injuries of the brain, where the local symptoms were concealed by grave general symptoms, such as coma and disordered states of the circulation and of the respiration; it was also indicated in desperate cases when the patient could not support a radical operation; and finally, in cases where the intracranial pressure developed after days or weeks. Puncture and aspiration might be followed by complete recovery in such cases.

Operations on the Spine.

Professor HILDEBRAND (Berlin) recommended somewhat active intervention in the following three affections of the spine: 1. In traumatic lesions of the vertebral column where compression of the spinal cord was liable to be produced by hæmorrhage. In these circumstances an early operation might prevent irreparable damage to the cord. It was sometimes difficult to make out whether the cord had been totally or partially injured. He had operated for four lesions of the cervical, five of the dorsal, and one of the lumbar vertebræ. 2. In spondylitis. He said that the paresis of the extremities occurring in cases of spondylitis was not always due to compression brought about by vertebral caries, but might also be caused by tuberculous growths filling the vertebral canal, so that such cases could not be successfully treated by extension. An operation was therefore to be recommended when no improvement has been obtained within a few weeks by orthopædic measures. In 9 cases of spondylitis tuberculous growth was present in the vertebral canal in five instances; 2 of these patients recovered, 3 were improved, and 4 were unchanged. 3. In growths of the spine. The making of a diagnosis as to whether a growth was situated in the spine or outside it was somewhat difficult and was, moreover, of no great importance. An operation was always indicated. Of 13 cases 3 died. It was remarkable that the strength of the vertebral column was not at all impaired by laminectomy. Professor Hildebrand had performed 35 laminectomies with 9 deaths.

Operations for Little's Disease.

Professor KÜTTNER (Breslau) explained that the spastic contractions of the muscles in diseases of the pyramidal tracts was caused by the absence of the inhibitory faculty, so that every muscle had a tendency to a maximum reflex contraction, no matter whether a cortical or a spinal lesion was present. Dr. Foerster of Breslau had proposed to interrupt the reflex circuit by a resection of the posterior roots; when this was done the effect of peripheral irritants was so much diminished that contractions no longer occurred. Professor Küttner has performed this operation on ten children who were all bedridden and had rigid limbs. As the children were all rather delicate he divided the operation into two stages; the roots of the second, third, and fifth lumbar nerves and the second sacral nerve were removed. No death had occurred, and there had been a remarkable improvement in the state of the children, who after the operation had undergone orthopædic treatment. The children were shown at the meeting; they were able to walk with the aid of sticks.

Professor KLAPP (Berlin) reported 6 cases of the above operation performed in Professor Bier's clinic with 1 death. In the other instances the operation was successful. Slight spasms reappeared some time after the operation but not to such a degree as to interfere with the use of the limbs.

Professor TIETZE (Breslau) said that he had performed the operation on 8 patients, of whom 2 suffered from Little's disease, 1 from spondylitis, 1 from multiple sclerosis, 1 from myelitis, and 2 from spastic contraction after apoplexy. He had found that the children supported the operation better than the adults, of whom 3 died. The functional results were better in Little's disease than in other affections.

Operation for Stenosis and Rigid Dilatation of the Thorax.

Professor FREUND (Berlin) said that stenosis of the superior aperture of the thorax was caused by a defective development of the cartilage of the first rib. Its sequel was a derangement of the function of the apex of the lung which favoured invasion by tubercle bacilli. At a later stage there might be ossification of the cartilage with subsequent rupture of it leading to pseudarthrosis. The mobilisation of the superior aperture of the thorax by the pseudarthrosis might result in the patient recovering from the tuberculosis. Rigid dilatation of the thorax was generally caused by an affection of the cartilages of the ribs; they showed a yellow fibrillation and cavities leading to an increased volume of the cartilages by which the thorax was brought into a permanent position of inspiration and as the lungs must follow the thoracic walls emphysema was the result. In stenosis of the superior aperture of the thorax mobilisation by resection of a piece of the first rib was indicated; this, however, should only be done in cases where the tuberculous affection had not yet exceeded the border of the second rib. To mobilise total rigidity of the thorax pieces of the second to the fifth costal cartilages might be removed; the operation was, however, indicated only in cases where the emphysema had not yet led to atrophy of the lungs or the diaphragm.

Professor MOHR (Halle) said that when rigidity of the thorax arose from the condition described by Professor Freund the deformity might be improved by operations, but that other forms of rigid thorax must be excluded. The diagnosis might be made by radiography and spirometry to distinguish Freund's type from other rigid types, such as the paralytic and the senile thorax. Professor Freund's type was, moreover, characterised not only by palpable swelling but also by hyperæsthesia of the cartilages. An operation was totally contra-indicated in a paralytic thorax, where it would only increase the existing expiratory condition. Bronchitis and asthma were not only not contra-indications against the operation but were in fact relieved by it. Disorders of the circulation must be controlled by internal treatment previous to an operation, and when this was not possible an operation could not be performed. Operations were also inadvisable at an early stage of the disease and they should be attempted only in cases of real rigidity. With regard to an operation for stenosis of the superior aperture of the thorax accompanied by tuberculosis, Professor Mohr said that he had had little experience, but he pointed out the difficulty of diagnosing the deformity during life, and was of opinion that the patients would certainly not consent to an operation in such an early stage of tuberculosis.

Professor VON HANSEMANN (Berlin) said that he had found in numerous post-mortem examinations that the typical form of tuberculosis of the apex of the lungs showed in the majority of cases stenosis of the superior aperture of the thorax as described by Professor Freund. In his opinion the idea that the predisposition to invasion by tubercle bacilli might be removed by Freund's operation was an excellent one, and he thought that neither an advance of the tubercle bacilli to the region of the third rib nor the formation of cavities was a contra-indication. Dilatation of the right side of the heart was not a contra-indication, the circulation adapting itself to the existing wants. In addition to typical emphysema there was another form dependent upon weakness of the elastic fibres of the lungs and not associated with disease of the cartilages. It did not happen before the thirtieth year of life and was, of course, not operable.

Dr. VON DEN VELDEN (Düsseldorf) reported 10 cases of operation for rigid dilatation of the thorax. The operation was completed in one stage; resection of the cartilages of the second to the fifth rib of one side was sufficient. The necropsy of patients who had succumbed to intercurrent diseases showed that the gap became closed by a bridge of connective tissue which remained elastic. Favourable results for respiration and circulation were ascertained by physiological methods.

Dr. SEIDEL (Dresden), speaking in the discussion, said that his first operations were performed two and two and a half years ago, and that the improvement then effected had continued to the present time. The operated side showed a marked retraction; the circumference of the thorax had decreased and the respiratory extension had increased. There had been no union of the cartilages.

Professor FRIEDRICH (Marburg) said that both the immediate and the permanent results exceeded his hopes. The improvement was the more remarkable as an ossification had occurred. The operation was, however, not without danger, for he had lost a patient on the second day from bronchopneumonia.

Dr. HIRSCHFELD (Frankfort) reported that he had resected the cartilages in a girl suffering from attacks of bronchial asthma, and when this operation had proved insufficient he had performed resection of the manubrium sterni, which had been followed by complete recovery.

Dr. WULLSTEIN (Halle) recommended longitudinal resection of the sternum instead of a resection of the cartilages.

Dr. HARRAS (Hanover) said that resection of the first cartilage had no influence on stenosis of the superior aperture of the thorax and that this was the more to be regretted because the connexion between stenosis and tuberculosis of the lungs was obvious. Tuberculosis of the lungs existed in 25 per cent. of bodies having a wide aperture of the thorax, and in 85 per cent. of bodies showing stenosis of the thorax.

(To be continued.)

THE HUNGARIAN BALNEOLOGICAL CONGRESS.

(FROM OUR BUDAPEST CORRESPONDENT.)

THE Twentieth Hungarian Balneological Congress was opened in the rooms of the Budapest Royal Society of Medicine on April 16th. Dr. ARPÁD BÓKAY, Professor of Pharmacology at the University of Budapest, presided, and most of the Hungarian and Austrian balneological authorities were present.

The PRESIDENT in his opening address gave expression to his regret that fewer addresses would be delivered at this congress than on former occasions, and that among the speakers new names were conspicuous by their absence. Reminding his hearers that this state of things indicated stagnation and a retrograde tendency, he contrasted with it the example of French balneological physicians, who at the close of the season went each year to medical schools and universities for the purpose of study and increasing their knowledge.

Dr. DALMADY ZOLTAN (Tátrafüred) delivered the first address, his subject being the influencing of diatheses by physical methods. He said that diatheses might be divided into three classes—namely (1) those manifested in family relations; (2) those dependent on physiological conditions; and (3) those caused by pathological changes. Biological diatheses could be modified only by means of artificially produced biological mediums, as, for instance, the constant variety of the circumstances of living and certain stimuli causing protracted differences. The chief class of physiological diatheses were due to changes produced by want of exercise; this might be remedied by the use of so-called strengthening methods of treatment. The treatment of diatheses brought about by diseased conditions proceeded on almost the same lines as the treatment of the diseases causing the diatheses.

Dr. V. D. LENKEI delivered the second address, his subject being the atmosphere in the neighbourhood of Lake Balaton (Platten See), and the radio-activity of the water and the underlying strata of this lake. He detailed the procedure by which he measured the radio-activity and described the results arrived at by these measurements.

Dr. SCHULHOF (Hévviz) read a paper on Balneotherapy in Serious Nervous Disorders. He asserted emphatically that as a general rule baths for nervous diseases were not wisely chosen. The Hungarian public were not accustomed to ask their medical advisers before going to a bathing resort; they simply followed the prevailing fashion, and when a certain thermal bathing station was fashionable on account of its amusements they went there. If they had previously obtained medical advice on the subject many of them would have been cautioned against taking thermal baths. Dr. Schulhof, however, believed that there were some nervous disorders in which long-continued hot baths, if properly applied, might be of great benefit.

Dr. KALLOS, a balneologist in Csiz, which has some repute for its iodine waters and was the Mecca of scrofulous patients in Hungary, spoke in regard to artificial mineral waters. He said that the chemical constitution of a natural mineral water might by analysis be ascertained with a high degree of precision, and from this analysis a close imitation might be made artificially, but the artificial product nevertheless did not produce the same therapeutic results as the natural water. He had prepared an artificial iodine water which was in respect of its mineral constituents analytically identical with the natural Csiz water, but he found that in therapeutic efficacy the artificial water was far inferior to the natural one. This was, in his opinion, due to some unknown constituents of the natural water, which chemical analysis had not yet succeeded in discovering.

Dr. FARKAS read a paper on the Effect of Change of Weather on Different Patients. He said that some patients were wonderfully prescient of change of temperature. These "live thermometers," as he called them, could foretell the weather 24 hours in advance. He had a patient who predicted changes in the weather from his sensations of headache, pain in the bowels, and exhaustion.

Dr. TÜMEGI (Balatonfüred) described his experiences with carbonic acid baths in the treatment of heart diseases. He said that the beneficial action of these baths was undeniable. According to his observations, their efficacy depended only on the amount of the carbonic acid constituent and the temperature of the water, the saline constituents being of no importance at all.

Dr. WEISZ EDE showed an apparatus of his own invention for the treatment of lameness or cases in which the movements of the limbs were restricted.

The PRESIDENT of the Congress read a paper on the Indications for the Use of Calcareous Waters. He said that such waters, especially those containing both lime and magnesia, were up to the present chiefly in request as table waters although they were used in certain kidney diseases. He called the attention of the congress to the important part which lime played in the organism, especially during pregnancy and lactation, during the development of the body in childhood, and in connexion with some diseases of the blood. A very pleasant and efficacious way of administering salts of lime was to make the patients drink calcareous mineral waters.

Dr. LÖW read some statistical data as to the attendance of visitors at the Hungarian balneological resorts, and quoted figures from which it appeared that in 200 such resorts there had been 218,283 visitors during 1909, showing an increase of 11,806 over the number for 1908. He also said that Hungary exported mineral waters (chiefly bitter water) to the value of about 10,000,000 kronen (£400,000), as compared with imports to the value of only 1,300,000 kronen.

Several other papers of balneological interest were read during the meeting, and the members of the congress were afterwards entertained at various social festivities.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Insanitary Property in Liverpool.

THE medical officer of health (Dr. E. W. Hope) has published in printed form his annual tabulated statement in regard to the demolition of insanitary property. The net result shows that during the four years 1906, 1907, 1908, and 1909, 1112 insanitary dwellings had been demolished, 311 had been closed and await demolition or reconstruction, and 514 had been reconstructed and rendered sanitary, making a total for the four years of 1937, excluding those in schemes, but still occupied. Of the total named, 874 were dealt with in 1906, 391 in 1907, 317 in 1908, and 355 in 1909.

Public Health Congress in Birkenhead.

The forthcoming congress of the Royal Institute of Public Health, of which His Majesty the King is patron and His

Royal Highness the Prince of Wales vice-patron, will be held in Birkenhead from July 18th to 23rd next. It has a strong and distinguished number of office-bearers, including Mr. W. H. Lever, ex-M.P. for the Wirral Division, the president of the congress, and Dr. R. Sydney Marsden, the honorary general secretary. Sir Lauder Brunton is president of the Section of Preventive Medicine and Vital Statistics. Sir William Ramsay is President of Section II., including Chemistry, Bacteriology, and Meteorology. Sir Thomas Oliver is president of Section III., including Industrial and School Hygiene. Mr. Henry Vivian, M.P., is president of the section which includes Town-planning and Municipal Architecture. Amongst the vice-presidents of the various sections are Sir John William Moore, Sir Rubert Boyce, Dr. W. T. Prout, C.M.G., and Dr. Owen Williams. The list of papers to be read is a long and interesting one. The Earl of Meath will read a paper asking "Are the Tendencies of Present Educational and Social Influences in the Direction of an Unwise Sentimentality, tending to a Weakening of the Moral Fibre of Children, and becoming a Serious Social and Political Danger to the State?" Professor Benjamin Moore will read a paper on the Nationalisation of the Public Health Service, whilst Dr. E. W. Hope (the medical officer of health of Liverpool) will read a paper on the Need of a Quinquennial Census.

University of Liverpool School of Hygiene.

The examination of students who attended the courses of instruction in sanitary science during the past session took place at the University last week. 46 candidates presented themselves for examination, and of this number 33 satisfied the examiners and were awarded certificates of proficiency, entitling them to act as sanitary inspectors. A fair proportion consisted of females. The examiners were Mr. F. Vacher, late medical officer of Cheshire, and Dr. A. A. Mussen, assistant medical officer of health of Liverpool.

May 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Edinburgh.

THE half-yearly meeting of the General Council of the University was held on May 4th. The Medical Curriculum Subcommittee presented a long and important report concerning the scope and arrangement of the courses of instruction and the time and arrangement of the examinations for the degrees of M.B. and C.M. Among other recommendations the committee suggests that attendances at classes for instruction in the subjects of the first professional examination shall not be held to constitute any part of the five-years course of professional study, if such attendance has been given prior to registration. But students who present themselves from any recognised institution may be admitted to examination in one or more of the subjects of the first professional examination without attending the University course or courses in such subjects. An elaborate time-table for the whole five years was also submitted.

Annual Meeting and Conference in Edinburgh of the National Association for the Prevention of Tuberculosis.

The annual meeting and conference of this association is to be held in Edinburgh from July 2nd to 5th. The President of the conference is Professor W. Osler; the chairman of the executive is Sir Alexander Christison, Bart.; the honorary treasurer is Dr. R. W. Philip; and the honorary secretaries are Dr. W. Leslie Lyall, Mr. George A. Mackay, of the Local Government Board, and Dr. James Miller. The conference on tuberculosis will occupy July 4th and 5th. An exhibition will be open to the public similar to the exhibitions already held in London, Oxford, and Cambridge. A general committee is being formed, and visitors are expected from the continent and America.

The late Dr. John Smith.

At the weekly meeting of the managers of the Edinburgh Royal Infirmary the following minute was approved, and it was directed that a copy of it be sent to the widow of the late Dr. John Smith:—

The managers desire to record their sincere regret at the death of Dr. John Smith, consulting dental surgeon to the Royal Infirmary. Appointed dental surgeon in 1863, Dr. Smith for twenty-five years discharged the duties of this office with conspicuous ability and acceptance. Dr. Smith's services were frequently sought for by his colleagues on the medical and surgical staff, and his well-known technical skill and ingenuity were very highly appreciated, and proved of much advantage to the institution. On his retirement from the acting staff in 1888 Dr. Smith was appointed consulting dental surgeon to the infirmary, and he continued throughout to take a warm interest in its affairs. The managers are aware of the high honour and esteem in which Dr. Smith was held by the medical profession as well as by the community at large, and they are deeply sensible of the loss the infirmary has sustained by his death.

Drainage of the City of Glasgow.

On May 2nd the Lord Provost officially opened the new sewage-disposal works situated at Shieldhall. The ceremony marked not only the inauguration of the authorised southern section of the city scheme, but also the completion of the entire Glasgow main drainage undertaking. Before the opening of the Dalmarnock works—the first step in the scheme—the whole sewage of the city was discharged without any purification into the Clyde. The main drainage scheme for the collection and treatment of the sewage of Glasgow and the adjacent local authorities was authorised by various special statutes between the years 1891 and 1907. Next to the undertaking of the London County Council the scheme is the largest in the world. The territory included stretches along both sides of the river Clyde for a distance of about 15 miles, limited by the wilderness of Cadder on the north and the borders of Mearns Moor on the south, and extending westward from the Bishop Loch to Duntocher burn. The extent of the drainage area is 41½ square miles. The volume of sewage and the proportion of rainfall to be dealt with, which will originate within the indicated drainage area and which will be treated in the three separate works, is estimated at 250,000,000 gallons per day. The drainage area is divided into three sections, each distinct from the others, with separate works for the disposal of their sewage. It is the last of these works that was opened this week at Shieldhall. The completion of the work will remove from the Clyde the whole of the solid matters of the sewage of Glasgow and the adjacent burghs and will purify the dissolved ingredients to such an extent as will restore the river to a condition which must exercise a most beneficial influence on the health of the vast population residing within the territory affected. Following on this work, it is the immediate intention of the corporation to endeavour to arrive at a definite understanding with the upstream and downstream riparian authorities, who at the present time pollute the waters of the river without the area of the Glasgow main drainage scheme. Attention is also being turned to contamination which enters the Clyde from the various tributary streams, and an attempt will be made to purify the Kelvin, the Cart, and the Leven.

Aberdeen County Committee on Secondary Education: Appointment of Chief School Medical Officer.

At a meeting of the Aberdeen county committee on secondary education held on April 29th Dr. G. Mitchell of Birmingham was appointed to the post of chief school medical officer. There were 11 applicants. Dr. Mitchell is 32 years of age, and a native of Aberdeenshire. He graduated at the University of Aberdeen, M.B., Ch.B. 1903, D.P.H. 1904, and M.D. (highest honours) 1905. He was for nine months house surgeon at the Sick Children's Hospital, Aberdeen, and then studied at the London Hospital and the Hospital for Sick Children, Great Ormond-street, London. For the last six months he has assisted Dr. W. Sisam, medical officer of health of Handsworth, in his work of medical inspection of schools and school children. The salary is £300 per annum, rising by four annual increments of £25 to £400 per annum, with travelling and other expenses.

Aberdeen School Board and Medical Inspection.

The Aberdeen School Board has now reported that it has considered the recent request of the provincial committee for access to certain schools by the medical officer of the committee and by senior students. This facility was sought for observation purposes in connexion with the study of school hygiene and for the employment of the provincial committee's medical officer in the actual medical inspection of certain schools without salary, but under the supervision of the medical officer of the board and subject to his instructions. The chairman drew attention to the result of the board's recent inquiries into the practice on both points in Edinburgh and Glasgow, and moved that the practice

referred to, which worked with no detriment to the interests of the children placed under observation, and with no friction between authorities, be followed in Aberdeen. The board in committee concurred. It was resolved accordingly that reasonable facilities be accorded the provincial committee's lecturer on school hygiene to visit any of the board's schools along with his students for observation purposes, by previous arrangement in every case with headmasters; and for the rest that the board's responsibility for the actual medical inspection of the John-street Demonstration School, of which the provincial committee remains the managers, be left, as in Edinburgh and Glasgow, in charge of the provincial committee's own medical officer if so desired.

May 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Students' Union of the Royal College of Surgeons: Inaugural Meeting.

THE formal inauguration of the Students' Union of the Royal College of Surgeons in Ireland took place on April 30th. The union had its inception in a meeting held on Dec. 16th last, and owes its existence almost entirely to the interest taken in the life of the medical student by Sir Henry R. Swanzy, ex-President of the Royal College of Surgeons in Ireland, and the recent co-opted professor of anatomy at the School of Surgery. As a result the Albert Hall, the old examination hall of the College, has been made the students' common room and comfortably furnished, while the Council has generously undertaken to supply firing and lighting. Mr. J. Lentaigne, the President of the College, who attended in his official robes, made a speech on declaring the union open, in which he dwelt on the great backwardness of the quality of the teaching in his own student days, and the low standard of physical comfort which was provided for the students of the various medical schools. Their social and moral requirements were absolutely uncared for; "the lectures were delivered in a careless, slipshod fashion, so as to give him the least possible amount of value. When the time for the examinations came, in order to have a chance of passing, it became necessary for the student to plunge into a frenzied orgie of cramming, which was called 'grinding.' This left him little solid residue of knowledge for his future career." It is a dark picture of student life, but curiously enough, the Dublin School of Anatomy and Surgery reached the zenith of its reputation when similar methods were in vogue.

The Rev. Thomas Waugh Belcher, D.D., M.D.

In the Rev. Thomas Waugh Belcher a very prominent and popular member of the medical profession has passed away. Dr. Belcher was M.A., M.D., M.Ch., and D.D. of Dublin, M.A., M.B. of Oxford, and F.R.C.P. of Ireland. He was formerly chief librarian and an examiner of the Royal College of Physicians of Ireland and also physician to the Dublin Dispensary for Skin Diseases. Dr. Belcher, after taking Holy Orders, was appointed vicar of a London parish, and later was made rector of Frampton Cotterell, near Bristol, where he remained until his decease. Dr. Belcher was a great authority on "Canon law" in the Church of England, and he contributed various articles and essays on Church matters. He was always interested in medical matters, and was an active member of the Guild of St. Luke. At a recent meeting of the Royal College of Physicians of Ireland a resolution of sympathy was sent to the widow stating that the President and Fellows desired to "record their appreciation of the honour shed upon the College by the varied attainments and learning of their colleague and friend, and to convey to the family of the deceased an expression of sincere sympathy with them in their bereavement."

Health of Belfast.

The report presented at a meeting of the city council of Belfast on May 2nd for the four-weekly period between March 20th and April 16th showed that the death-rate from all causes was 20·6, 7·0 from chest diseases, and 2·7 from zymotics. During the month 96 cases of infectious disease were notified, which is a reduction of 22 as compared with the preceding month, but 39 in excess of the numbers notified in the same period of last year. The decrease is most marked in scarlet fever and erysipelas, the numbers being 38 and 23, as compared with 59 and 30 respectively. Curiously, 2 cases of typhus fever were notified from a house which was clean and with no overcrowding. Every effort was made to trace the source of the infection, but without success. The excessive death-rate in zymotic diseases (higher than in the preceding month or in the corresponding month of last year) was to be attributed to the prevalence of measles and whooping-cough, from which there were respectively 37 and 33 deaths registered, as compared with 1 and 12 in the same period of 1909. A most curious circumstance is the association, so often noticed in Belfast as elsewhere, of measles and whooping-cough.

Belfast Improvement Scheme.

An inquiry into a scheme made by the corporation of Belfast—within the meaning of the Housing of the Working Classes Act, 1890—for the improvement of certain unhealthy areas, and also into an application for sanction to a loan of £116,342 5*s.* for the purpose of carrying out the scheme, was held last week in Belfast by Mr. P. C. Cowan, chief engineering inspector of the Local Government Board, and terminated on April 29th by Mr. Cowan confirming the scheme, with a slight amount of alteration and modification. The inspector regarded the scheme on the whole as a very excellent one.

Health of Lurgan.

Dr. Samuel Agnew, medical officer of health of the Lurgan urban district, has issued an interesting report for 1909. He points out, as an indication of the backwardness of sanitary reform in Ireland, that in the 22 town districts of Ireland with an aggregate population of 1,142,308, the crude death-rate last year was equal to 19·2 per 1000, whereas in the 76 largest English towns it did not exceed 14·7. During the year 1909 the birth-rate for Lurgan was 21·8 (the average birth-rate for the previous ten years was 30·8) and the death-rate 19·6. The zymotic death-rate was 1·3. An account of an outbreak of scarlet fever which occurred in April and May, and which included 64 cases, is given. Dr. Agnew believes that the majority of the cases occurred through articles of white work or handkerchiefs being given out for work from two factories. These articles came into contact with people suffering from the disease. When these two factories, at the suggestion of Dr. Agnew, ceased distributing out-work for some time, and took none back during the same period until after disinfection, the epidemic was stayed. Dr. Agnew refers to the powerful influence of the Women's National Health Association in moulding public opinion, without which, he says, it is vain to hope for any progressive legislation on public health matters in Ireland.

May 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The French League for Physical Training.

THE French League for Physical Training has been recently organised in Paris under the general superintendence of Professor Gilbert. Its objects are the promotion of health, beauty, strength, and alertness among children of either sex, both those who are still at school and those who have completed their school attendance. For this purpose the league relies on rational physical training, in which use is made of (1) systematic movements based on the gymnastic principles of Ling, with additions and modifications suggested by recent scientific research; (2) free movements in active recreation, games, athletic exercises, various sports, and life in the open air; and (3) the personal hygiene of both sexes at all ages. The league is also endeavouring to form athletic associations for adults and to obtain from the State and from the communes the appropriation of grounds and open spaces for the benefit of those who undergo this training. At the first meeting of the league last March a commission was appointed for the purpose of making arrangements to offer a prize for a short, simple, and practical book on physical training for the use of children and adults of either sex. At the next meeting it was resolved to take up the question of laying out children's playgrounds with clean sand in the Paris squares. The members of the league look forward to giving attention successively to the various problems connected with the physical training of the population.

Female University Students.

The female students of the University of Paris have recently formed themselves into an association. Madame Mulon, a medical graduate, who has been elected president of the association, intends to provide certain facilities for the members in connexion with their studies, and to assist them in establishing an office through which appointments may be obtained. The premises of the association will be opened on May 29th, and will include an inexpensive restaurant.

Feeding-bottles with Tubes.

A law which has for several years been greatly desired has now been passed and has recently appeared in the *Journal Officiel*. It relates to infants' feeding-bottles provided with tubes, and declares that the sale, the offering for sale, the public exhibition, and the importation of such bottles are forbidden. It will come into operation three months after promulgation and will be enforced by the inspectors of pharmacies and some other officials. Contravention will be punished by a fine ranging from 25 to 100 francs, and a repetition of the offence may be followed by imprisonment for a period varying from eight days to a month. In all cases where feeding-bottles with tubes have been seized the courts may order their confiscation.

Surgical Lectures by Dr. Doyen.

In accordance with the right which the regulations confer on every Doctor of Medicine, Dr. Doyen applied to the Council of the University of Paris for permission to deliver a free course of lectures in the rooms of the Faculty of Medicine, and the permission in question was duly granted. These lectures, which have for their subject the relations of topographical anatomy to surgical technique, were announced long beforehand, and at 6 P.M. on April 18th an enormous crowd of students filled the large amphitheatre of the École Pratique where the lectures were to be delivered. On making his appearance Dr. Doyen had a very noisy and hostile reception. The shouting and yelling of a portion of the audience combined with the applause of another section created such a din that for a whole hour the distinguished surgeon could not make himself heard and he ultimately withdrew. In the evening M. Landouzy, the dean, wrote to Dr. Doyen informing him that in order to prevent a recurrence of these disorderly scenes the lectures would for the present be discontinued. This decision was received with mingled feelings. Everybody knew that preparations for the tumult had been made by the young *internes* of the hospitals several days beforehand. It was also evident that the Faculty of Medicine, while allowing Dr. Doyen to deliver a course of lectures in its amphitheatre, had not dealt quite fairly with him, for it would not have been absolutely impossible to prevent this demonstration. On a former occasion in a free course of lectures delivered at the Sorbonne by a Mr. Thalamas he expressed opinions regarding Joan of Arc which so greatly shocked the younger members of the university that for a fortnight there was a succession of violent scenes. The lectures were nevertheless continued under the protection of the police, who made several arrests and took measures to secure the liberty of free speech. Dr. Doyen has not been privileged to the same extent, but in order to avoid disappointing many students who were really seekers after knowledge, as well as the foreign medical men whom the announcement of the lectures had brought to Paris, he addressed them in a specially hired lecture-room, admission to which could be obtained only by tickets costing 10 francs. This course of lectures commenced at 6 P.M. on April 25th, the audience being numerous, attentive, and orderly, and the demonstrations given by Dr. Doyen were of such novelty and interest that the Faculty of Medicine might well have allowed them to take place on its premises. He showed on a screen lantern-slides photographed directly from successive parallel sections made on the cadaver, some sections being transverse, some longitudinal, and some sagittal. Several of these pictures exhibited the natural colour of the parts, but what was still more surprising was the direct projection of anatomical specimens on the screen by means of an absolutely new process which seems to be a great improvement in the pictorial illustration of lectures. The specimen being intensely illuminated by the light of acetylene burners reflected by parabolic condensers is placed before an immense photographic lens which throws an image of the specimen on a translucent screen just as a picture is shown on the ground glass of a photographic camera. This takes place in a room at the back of the lecturer's platform, so that when the light is turned down in the lecture-room the pictures can be seen by the whole of the audience. All the details of the preparation being in this way rendered distinctly visible, the parts to which the speaker is referring are touched at the proper time by a pointer held in the hand of an assistant, both the hand and the pointer alike being shown on the screen. By this method a class can follow the successive stages of a surgical operation much better than when witnessing a real operation, because in the latter case the manipulations of the surgeon on the operation table cannot be distinctly seen except by the two or three spectators close at hand. This demonstration by Dr. Doyen was a decided success, and showed that great improvements can now be made in the art of surgical demonstration.

The "Cure" Tax.

A regulation has just been issued laying down the conditions under which special taxes may be levied at mineral water stations. According to this regulation the Communes, after having lodged certain documents at the Conseil d'État, may authorise the levying during a whole or part of the year of a special tax on these stations. The profits will be wholly given to the upkeep and development of thermal or climatic health resorts. The tax is levied on persons who have no domicile in the commune and possess no residence there and the scale may be fixed per person and per day of the visit, or per person independently of the length of stay, and is based upon the style and price of his lodgings. The tax is subject to deductions on account of the ages or number of persons in one and the same family, and varies according to the season of the year. The tax is not levied on any stay under one month, and it will be collected by the agency of lodging-house and hotel keepers.

May 2nd.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Prophylaxis and Therapeutics of Acute Tonsillitis.

Dr. A. Schönemann, professor of oto-rhino-laryngology at the University of Bern, has just published a paper on the Rational Treatment and Prophylaxis of Acute Tonsillitis. He mentions that various observers have recognised that a connexion exists between tonsillitis and other acute infectious diseases, such as polyarthritis (Sahli), endocarditis (Lamnitz), nephritis (Eichhorst), appendicitis (Kretz), and typhoid fever (Lentz). Dr. Schönemann regards the tonsils as lymphatic glands, and is of opinion that inflammation occurring in them is of a secondary nature, not being caused by infection from the mucous membranes of the mouth but being due to primary inflammation in the nose. His clinical observations on patients are corroborated by a series of experiments made by Dr. Lénard on animals and published in the *Archiv für Laryngologie* in 1909. Professor Schönemann's prophylactic and therapeutic treatment consists in the application of 5 to 10 drops of a 2 per cent. solution of protargol or a 5 per cent. solution of collargol once a day. The patient is to spit out the fluid as soon as it reaches the back of the throat. In acute cases he prescribes from 40 to 50 grains of aspirin to be taken on two consecutive days once a day within a quarter of an hour, together with plenty of hot herb tea (Hollunderthee) as an internal antiseptic and sudorific. He is opposed to the use of nasal douches.

Treatment of Infantile Jaundice by Cold Enemata.

At a meeting of the Society of Medical Practitioners held at Zürich on April 20th Dr. Theodore Zangger reported on a simple treatment of infantile jaundice which has given him good results in a series of 20 cases observed during the last 10 years. He orders the administration of cold enemata consisting of about 10 ounces of water at a temperature of 56°, 54°, or 48° F. once or twice a day till the stools become normal, which always takes place in two or three days. If constipation is persistent olive oil and soap lather made with water can be added or the temperature of the water may be

reduced to 40° F. These enemata promote the flow of bile and cause increased muscular contraction of the intestine. In the case of adults the results are not so favourable as in children, and saline aperients are often necessary.

Zürich, May 2nd.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

The National League against Malaria.

NOT a day too soon the General Council of the "Lega Nazionale contro Malaria" has held its first meeting in Rome, and the proceedings, necessarily of an initiatory character, gave ample earnest of the solid and thoroughgoing work expected from it. The president, the veteran Dr. Guido Baccelli, was supported by the flower of the profession, academic and consultant, and his outline of the "plan of campaign" received the cordial adhesion of the speakers who followed. Among these were the Senator Camillo Golgi of Pavia, Professor Grassi of Rome, Professor Queirolo of Pisa, Professor Lustig of Florence, and Dr. Bordoni-Uffreduzzi of Milan—past masters in laboratory work, in clinical experience, or in scientific hygiene. The financial question, and the bestowal of rewards in the form of diplomas, medals, and such like incentives to profitable emulation, evoked a good deal of discussion, but the most interesting proposal, ultimately carried, was that of publishing a "Bollettino della Lega" (organ of the League), under the editorship of Professor Gosio and Professor Gabbi, assisted by Dr. Tropeano and Dr. Montoro. By this means the medical world will have access to the findings of the research department, and also to the conclusions arrived at under such rubrics as the following: 1. Is malaria a misnomer? Or does it connote an atmospheric condition which breeds and maintains the anopheles? 2. Is that condition due to the state of the soil, whether derelict, degenerate, or imperfectly cultivated, as evidenced by the foci of malaria in Italy, on the mainland, and in the islands? 3. Has the systematic exhibition of quinine a really prophylactic efficiency? 4. Has such exhibition, prolonged as a "food," no injurious effect on the vaso motor system? 5. And finally, What is the scientific etiology, the *causa causans*, of the malady, with a view to its prevention? Answers to these questions have already resulted in quite a "literature" (mainly from Italian contributors), the sifting, appraising, and supplementing of which will be one of the most attractive features of the contemplated "Bollettino." The proceedings, which included a scheme of coöperation with the provincial authorities and with the Italian Red Gross, were brought to a close with a unanimous vote of thanks to Dr. Baccelli.

A Young Medical Martyr.

As I write the news reaches me of the death of Dr. Cesare Zonchello, a Lucchese by parentage, at Gedda on the Red Sea. Dr. Zonchello, who had completed a distinguished academic course, having been, in fact, one of the ablest and most accomplished pupils of Dr. Angelo Celli of Rome, repaired some time ago to the Erythrean littoral, there to study the etiology of pestis bubonica and to experiment on the means of combating it by prevention or cure. The climate, however, combined with the severity of the work to try a constitution not conspicuously robust, and so, when just entering on his thirty-second year, he was taken ill and died, to the poignant regret of his teachers and contemporaries, all of whom had formed the most sanguine anticipations of the success awaiting him.

April 26th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Anti-rabies Institute in Vienna.

A REPORT of the Institute for Anti-rabies Inoculation in Vienna has just been published, dealing with the events of the years 1907 and 1908. Altogether 955 persons received prophylactic or therapeutic inoculations, and 148 persons who had presented themselves received no treatment because they had either been bitten by an animal which was not rabid or because the wound had not bled. Of the 955 inoculated persons 107 had to be excluded from the statistics in consequence of the examination of the respective animals in the pathological laboratory proving negative. The majority of these individuals had been injected only for their personal satisfaction. After deduction of these there remained 846 cases available for clinical observation. 707 were in-patients and 248 were out-patients. Of all the persons under treatment 77 per cent. had been injured by animals which were proved to be suffering from rabies; in 15 per cent. only the symptoms in the living animal, not the post-mortem appearances, had led to the diagnosis of the animal being diseased; and the remainder of the cases were bitten by animals which were to be suspected of having rabies on account of the place they came from. In 1907 there were 2 deaths amongst those who received treatment at the institute, while in 1908 there were 4 fatal cases, or 6 deaths in two years (0·7 per cent. of all cases treated). The number of all cases treated since the establishment of the institute is now 3572, with 26 deaths (0·7 per cent.). One case was very interesting. A man who had been bitten on Nov. 9th was inoculated once on Nov. 29th and died the next day. At the post-mortem examination chronic tuberculosis of the lungs and changes due to chronic alcoholism were found. Portions of his brain, however, when injected into the subdural space of rabbits gave a positive result in three passages. Altogether, 20 persons died from rabies in Austria during the two years: 6 had been inoculated, 13 had had no prophylactic injections, and 1 died during the course of treatment. A comparison between the mortality of the cases treated and not treated is impossible as the number of the latter is unknown.

Unsatisfactory Condition of Various Medical Institutions.

A number of medical institutions have been planned, and the funds for some of them are in the hands of the respective boards, but several of them have not yet been commenced, and with such as are in course of erection the progress is so very slow that the unfavourable remarks made in some medical journals have not been too severe. One of these institutions is the new general hospital, which should have been finished at the end of this year, but at the present rate of building at least another five years will be required for its completion, for even the newly erected clinics for internal medicine and for laryngology have only just been roofed in. The delay is not due to want of money, because the £800,000 devoted for the purpose are at the disposal of the managing board. Another very large charitable institution is the mental sanatorium to be erected in Vienna. The 20,000,000 kronen (or about £1,000,000 sterling) were bequeathed by the late Baron Rothschild on the understanding that an institution should be erected for the treatment of sufferers from nervous disorders who cannot find help anywhere else. The committee have found a suitable site for the building, but prejudices, racial, religious, or of some other kind, have interposed an unsurmountable obstacle. A new institute for the teaching of physical laws and phenomena is an urgent necessity in this city. The present institute for this purpose is absolutely inadequate. It would be a veritable deathtrap if an accident should happen during experiments, so that the professor very wisely abstains from making them. The students have to be asked to come to the lectures not all at once but only in turns. A promise was obtained from the Government that a new institute would be ready by 1910, but it is not yet even begun. The radium institute, a gift by a wealthy private individual, is ready, but it cannot be made use of until an adequate physical institute is provided.

Celebrations in Honour of Professor Königstein.

A few days ago Professor Königstein, one of our best known ophthalmologists, celebrated the sixtieth anniversary of his birthday, and his numerous friends took the opportunity of expressing the respect and esteem which they have for him. Professor Königstein, who is also President of an important Austrian medical society, was the recipient of many honours, and a banquet at which he was entertained will be a memorable event in the social life of this city. He has had a principal share in establishing many useful medical organisations, such as the Medical Sickness Insurance Society, the Medical Protection Society, and some others, the main object of which is to assist practitioners who have to work hard for their living. An orchestra composed of medical men (Aerzte-Orchester), the creation of which is in a large

degree owing to his efforts, played musical selections at the banquet, thereby proving that the medical profession includes many members who may with justice claim possession of the artistic faculty.

A Case of Communication between the Trachea and the Œsophagus.

At a recent meeting of the Gesellschaft der Aerzte Dr. Schwarz showed X-ray photographs and plates of a remarkable case. The patient was a man, aged 69 years, who suffered from difficulty in swallowing and a diagnosis of carcinoma of the œsophagus was made. While under examination by means of the X rays it was seen that a solution of bismuth went down, not into the stomach, but into the lungs, with the result that on the screen a perfect image of the bronchial tree with all its branches came into view, except in the uppermost parts of the upper lobes of the lungs. The liquid had, in fact, been "swallowed" into the respiratory passages, so that the man breathed now only with a small part of his lung, and nevertheless did not experience any discomfort. Dr. Schwarz said that this extraordinary condition could not be easily explained. The man never complained of cough or any bronchial trouble, and although he must have swallowed all liquid, such as tea, milk, and coffee, into the lung for a period of at least three weeks, there never was any symptom of the pneumonia which was to be expected when liquids of such a nature came in contact with the alveoli. In the œsophagus a cauliflower-shaped tumour was found just at the level of the bifurcation in the trachea, and by means of tracheoscopy Dr. Kahler, in Professor Chiari's clinic, could demonstrate the point of communication between the trachea and the œsophagus, distant 24 centimetres (10 inches) from the teeth. A similar case was observed by Dr. Horner in the Vienna General Hospital five years ago, but at that time the technique of X ray examination was not so far advanced as at present, and it was impossible to obtain convincing plates for demonstration. In both cases it was only liquids which made their way into the lung, semi-solid food being swallowed into the stomach in the ordinary manner.

May 2nd.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Propagation of Tuberculosis among Children.

Professor Baginski, the Director of the Kaiser Friedrich Hospital at Berlin, gave a very interesting lecture on the above subject in the Imperial Medical Society Hall of Constantinople. In the course of his remarks he said that if there was a malady that was spread universally in all parts of the globe, causing enormous ravages and costing great sums of money to different Governments, it was tuberculosis. In case of an epidemic of, say, plague or cholera, the necessary measures of precaution, prevention, and cure are taken temporarily for a certain definite period of time, whereas in tuberculosis the strain, the struggle, the suffering, and the expense are constantly there year in and year out. Tuberculosis makes great ravages at every age, mainly among children. Of late the mortality here from tuberculosis has diminished, owing to hygienic precautions, but even with all that the mortality among children is terrible. In 1919 children inoculated with tuberculin there were 435 positive reactions, although in appearance these children looked perfectly healthy.

An Epidemic of Dengue Fever.

It is reported from Jerusalem that a severe epidemic of dengue fever has been spreading in an alarming way along the Syrian and Palestine coasts. Thousands of people, old and young, poor and rich alike, were stricken by the disease. It is mentioned in the Turkish papers that dengue has something like 50 different appellations and that in the named places the severest known epidemics were those of the years 1886, 1896, and 1909. It is believed that in 1886 the epidemic was carried to Smyrna by cargoes of old rags brought annually in large quantities to that city from Palestine, Syria, and Cyprus. The Arabs call the fever "abou rukabah," which means "the father of the knee," as, of all joints, that of the knee experiences in dengue the most excruciating pain. A peculiar characteristic of the disease is said to be loss of memory, so that patients very frequently cannot remember familiar names and words. Dr. Lorch, who lived in Palestine for over 30 years, holds that people who have suffered from dengue fever acquire a certain predisposition to such infectious diseases as typhoid fever, cholera, and malaria.

The Attitude of Turkish Women to Medical Men.

The attitude of the hanoums to medical practitioners has changed much of recent years. Two or three decades ago no Turkish woman would ever have submitted to a physical examination by a doctor. All he could have persuaded her to do would be to show him her tongue through a rent in the *yashmak* or let him touch her pulse from behind a heavy curtain and in presence, of course, of an Argus-eyed eunuch or old female slave. Any attempt to apply a stethoscope to the chest would have been spurned as an impertinent presumption of Western "barbarism." No matter however severe the illness, the medical man could not go beyond certain strict limits of Islamitic usage and traditional custom. Even in cases of imminent danger to life these scanty limits were never allowed to be overstepped, and the belief in the incantations of a priest and the house remedies of old, ignorant, and superstitious women held unlimited sway and was always greater than the faith in the efficacy of medical skill and science. This is now changing, and changing rapidly. There are, of course, still many exceptions where antiquated views and conceptions are fanatically adhered to and practised, but these become rarer and rarer with each advancing year. Many Turkish women will now, when ill, voluntarily call on a medical practitioner, and never hesitate to submit themselves to a thorough physical examination. The general public opinion on these matters among the Turks is fast altering for the better and only in very rare cases is there now any difficulty at all raised as to letting the hanoum submit to an examination with stethoscope or other instrument.

A Jewish Hospital at Jaffa.

A movement has been started to create a small Jewish hospital at Jaffa. I understand that already 1500 francs have been collected for that purpose and that the interest in the undertaking is growing. A society consisting of Jewish ladies has in the meantime opened a special hall for the treatment of women in confinement. A certificated nurse has been sent from Europe to Jaffa.

Typhoid Fever at Koutahia.

An epidemic of typhoid fever still continues its ravages at Koutahia (Asia Minor). It has been decided to send there a medical practitioner as well as £T300 to combat the spreading of the disease.

April 30th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

National Campaign on Oral Hygiene.

A NATIONAL campaign on oral hygiene was opened in Cleveland, Ohio, on March 18th, under the auspices of a committee of the National Dental Association. At the instance of President Taft, Assistant-Surgeon Wilie of the Public Health Service was detailed to attend the meeting in a representative capacity. Surgeon Wilie explained the objects and methods of the committee on oral hygiene of the National Dental Association as being to secure the appointment of district dental inspectors and to provide for widespread dental education on oral hygiene in the public schools of the country. This movement had its origin in the meeting of the association in 1898, but owing to lack of proper appreciation of the importance of the subject the reform made little progress. The State of Massachusetts has taken cognizance of the importance of this work, and popular lectures on dental hygiene and prophylaxis are permitted in some of the public schools under the supervision of the respective boards of education. Several cities established clinics for the dental examination of the poor, but there was no widespread appreciation of the importance of the subject until the meeting of the National Dental Association in 1908, when one session was devoted to oral hygiene. This discussion aroused great enthusiasm and from that time the movement has taken on a national character. It is now proposed, under the auspices of the

National Association, to enter upon a campaign of education which shall extend to every State and city in the Union.

The Hospital Admission-rate for Tuberculosis among Merchant Seamen during the Past 20 Years.

Surgeon Young, of the Public Health Service, has made an elaborate report on the results of the establishment of a sanatorium for seamen affected with tuberculosis. The sanatorium was opened at Fort Stanton, New Mexico, in 1897, a location at a high altitude and in an arid district. The controlling reason for the establishment of the sanatorium was the fact that under conditions as they then existed patients who got well enough to demand their discharges went at once on board ship and spread the infection among their shipmates. The comparison is made between the out- and in-patients ten years before and ten years after the opening of the sanatorium. In 1889, ten years before the opening of the sanatorium, the out-patients numbered 543, and in 1908, ten years after the opening, they numbered 157; in 1889 the number of hospital admissions was 437, and in 1908 they were 342; the total of the two classes was in the first period 980 and in the last 499. It appears that the total admissions in 1908 are only 46·7 per cent. of what they were the year before the segregation began—viz., in 1896, when the total was 1061. Surgeon Young does not claim that this reduction is entirely due to the present policy, but he believes that it has had a notable influence in producing this result.

"*Tuberculosis Sunday.*"

The campaign against tuberculosis has reached another stage in this country. On "Tuberculosis Sunday" (April 24th) the clergymen of every denomination are urged to devote one discourse to the subject of tuberculosis. The suggestion has been received with the greatest enthusiasm, and there will be a general concurrence in the proposed method of educating the public in regard to the nature and method of prevention of the great white plague.

The Relation of the University to the Medical School.

President Schurman, of Cornell University, recently gave an address on the relation of the university to the medical school before the Joint Conference of the Council on Medical Education and the Committee on Medical Education of the American Medical Association. The address was important chiefly because it clearly pointed out the difference between the medical schools of the country under private control and management, of which there are still a large number, and those that are under the direction of university faculties. The private schools, he contended, must necessarily become commercial in their management, as they are established in the interest of a few individuals, and every device is resorted to to increase the number of students. The most disreputable feature of these schools is the low standard of qualification which they maintain in order to attract the masses of unfit students. "The personal profit of individuals," said the President, "has been the most powerful and prolific motive for the multiplication of medical colleges, as it has also been the most pernicious." Against these schools the profession has struggled for years in vain efforts to raise the standard of education. But a new era is dawning, and the general spirit of the age, as well as higher ideals of professional education, are, in the opinion of the President, working against these commercial medical schools. The first service which, in his opinion, the university renders to the medical school is to discourage its organisation or continuance without ample endowment. Though this service is negative, it is fundamental and vital. The second aid of the university is in determining the grade of preliminary education of students applying for admission. The third method of assistance of the medical department by the university is in securing a high class of teachers. This address will prove a powerful agency in the complete elimination of the private medical schools.

The Failure of the Emmanuel Method in California.

The much talked of method of treating nervous affections popularly known as the "Emmanuel treatment," the name being derived from the church of that name in Boston where the system was first promulgated, has proved a complete failure in California. This is the testimony of the Bishop of California, under whose direction a hospital was established for the purpose of testing its efficacy. The physician appointed to carry out the treatment in the hospital has resigned his position, declaring that the system was a failure, and the bishop has closed the institution. The physician made a public statement of the utter failure of the method, alleging that whatever may be the results of treatment by the Emmanuel system in Boston, it was evidently not adapted to the climate and people of California. The readers of THE LANCET will remember that the system was described in this correspondence as hypnotic suggestions by a priest. It was first published by the rector of the Emmanuel Church of Boston, and was adopted and attempted in several Episcopal churches in different parts of the country. Several prominent physicians of Boston endorsed the method, and to the extent of their influence gave considerable popularity to the system.

Illegal Sale of Cocaine in the Cities.

The traffic in cocaine has increased to a dangerous extent in the cities of the United States. It has been found that the drug is not only distributed to habitual users, but has even been given to public school children on the street. In the city of Philadelphia a crusade against the illegal sale of cocaine has been inaugurated under the direction of a member of the State Pharmaceutical Society. Several physicians have been arrested and also more than a score of retail druggists. On examination of the reports of wholesale dealers as to the amount of cocaine sold it was found that one had sold 1900 ounces of the drug in one month, and another's sales had amounted to 1400 ounces in the same time. This rate of sale would make their yearly sales between 15,000 and 20,000 ounces, which amount it is claimed is entirely too high for the quantity of the drug which can be disposed of legally. The crusade has gone so far as to cause the arrest of a United States inspector of drugs on the charge of unlawfully selling cocaine, and it is stated that there are several prominent men under suspicion of illegally dealing in the drug.

A National Secretary of Public Health.

The efforts to secure legislation from Congress creating a National Public Health Department have recently taken a new form. Hitherto the measure approved by the President and the larger number of medical societies has been to group together all the branches of the public service which have duties to perform relating to quarantine, life-saving, and the control and prevention of epidemics in the existing Bureau of Public Health and Marine Hospital Service. Recently an organisation, known as the "Committee of One Hundred," has introduced a Bill into Congress establishing a Department of Public Health, the chief officer of which is a "secretary of public health, who shall be appointed by the President a Cabinet Officer ..... with like tenure of office of other Cabinet Officers." The general provisions of the two measures are not unlike. It is unfortunate that the promoters of this most desirable legislation are now to be divided, for instead of devoting their united energies to a single measure they are quite likely to prevent any action of Congress by their own dissensions.

More Intimate Relations of Colleges and Hospitals.

The most important and least supplied feature in our system of medical education is actual service of the student in hospital wards. Of the two or three hundred medical graduates from the three schools of New York annually not more than from 10 to 15 are able to obtain appointments in the resident staffs of the hospitals. For the few vacancies which are open to the students on their graduation there are often from 50 to 60 applicants in competitive examination for each place. Of course, the student who passes the best technical examination wins the place, while the rest begin practice without the preparation which the hospital service of even a few months would have given them. New York has a total of 76 general and special hospitals, with 11,467 beds, but only 10 or 12 hospitals allow competition for positions on the resident staffs. If a scheme were devised by which medical students could fill the positions of *attendants* in the hospitals as well as on the regular medical staff, every graduate would have an opportunity to actually practise his profession under the immediate instruction of competent teachers. The first step towards a more intimate relation of the colleges and hospitals was taken recently when the College of Physicians and Surgeons added the physicians and surgeons of Mount Sinai Hospital

to its corps of teachers. This alliance will open to the students of the College one of the largest and best equipped hospitals in this city, and may be the beginning of a utilisation of the great number of hospitals for the more complete education of students.

April 24th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Plague.

THE plague returns for the United Provinces for the week ending March 26th show a decided decrease on the figures for the previous week, the total deaths being 6961, as against 9211. Azamgarh district still reports over 1000 deaths, and the mortality in the Ballia district runs to 788. Other severely affected areas are: Unao district 635 deaths, Ghazipur district 580, Gorakhpore district 481, Mainpuri district 359, and Bara Banki district 295. Five other districts report over 200 deaths in the week. The disposal of the dead continues to be a subject of inquiry in Calcutta in connexion with the suppression of plague, and considerable attention has lately been paid to the conditions prevailing at the burning ghats and burial grounds to the south of Calcutta city. It is satisfactory to notice that a recent tendency to bring a large number of the suburban dead into Calcutta for disposal has not been allowed to flag, for during last year the total so brought in was 3321, of which 1891 were cremated and the rest buried. The year has also furnished unmistakeable proof of the greater incidence of plague amongst the population living in huts, since it is estimated that 1 in 301 of the population living in *kutcha* or mud-built huts was attacked, whereas the ratio was only 1 in 433 for those living in *pucca* or stone-built dwellings. The cases in huts formed 68·4 per cent. of the whole, while the population living in huts is set down as less than 60 per cent. of the whole population. Attention is again drawn, on the year's work, to the preponderance of "single cases," and out of 2155 cases reported it is significant that not less than 1958 were single, so that the case incidence works out at not more than 1·1 per infected dwelling. These figures, while furnishing very strong proof against the conveying, in the majority of the cases, of the infection from one dwelling to another, also seem to indicate that the infection does not remain in the dwelling. The occurrence of a second case after an interval in the same dwelling also appears to be quite uncommon. It is evident, however, that the difficulties in discovering "contact" cases must not lightly be passed over. Information is consistently withheld, and owing to the undesirability of making searches inquiries are often fruitless. Regrettable as it is, it is therefore comprehensible that the hospital cases should have showed a mortality of 84·2 per cent., a distinctly higher figure, that is, than in 1908, and that during last year the mortality of cases seen alive in the early stages of the disease and the mortality in general should also have been higher.

Malaria in Tea Gardens.

A resolution has been issued by the Government of Eastern Bengal and Assam regarding the prevalence of malarial fevers among those working in the tea gardens of Jalpaiguri and Duars, which recently engaged the serious attention of the Lieutenant-Governor. As the information available on the subject is incomplete, the Lieutenant-Governor decided to appoint a representative committee to inquire into the sanitary and economic conditions under which tea-garden coolies live and to advise the Government what remedial measures, if any, should be undertaken. The committee assembled at Jalpaiguri on April 4th and consisted of the Hon. Mr. F. J. Monahan, President, Mr. Scroope, Mr. Chaplin, Lieutenant-Colonel F. R. Ozzard, I.M.S., and Major A. Leventon, I.M.S. The Lieutenant-Governor states he is confident that the Indian Tea Association and the planting community generally will assist the committee and supply such information, facts, and statistics relating either to the Duars generally or individual tea gardens as may be required.

The Campaign against Disease.

Lieutenant-Colonel C. C. Manifold, I.M.S., officiating Inspector-General of Civil Hospitals in the United Provinces, at a recent meeting of the United Provinces Legislative Council, during a debate on the financial statement of the provinces, drew attention to the expenditure on the prevention of disease. The fact that this was becoming more and more a feature of the medical budget must, he thought, force itself upon the attention of honourable members. When they realised that most of the diseases which had hitherto caused so much havoc in the United Provinces need not even exist if the means for their prevention were thoroughly carried out and employed in time, expenditure on these lines would, he thought, commend itself to all. Plague had been combated on scientific lines for some years past, and though there had been some recrudescence of this disease, yet they might reasonably hope after the good results obtained last year by the measures taken that the present outburst was only a flicker from the dying embers of the epidemic. Under the sanitation grant one of the most important new features was the employment of a special officer in the investigation of malaria, which in the United Provinces usually caused a greater mortality than other much more dreaded epidemic diseases, and yet it was one which modern science had shown to be a preventable disease. In scientifically studying its special conditions of existence in the United Provinces they were throwing out their scouts to prepare the way for a great attack upon it in the immediate future. The travelling dispensaries were a new feature, which would bring the greatest boon to the door of the agriculturist in remote places and would ensure that medicines, especially quinine, reached him. In devoting a sum to raising the pay of hospital assistants, they were recognising the services of a very hard-worked and deserving body of men, who formed the main body and should be the backbone of the medical department. Their pay had now been brought up to the same level as that of the sister branches. Lieutenant-Colonel Manifold subsequently mentioned that the Medical College at Lucknow would soon be nearing completion, and a system of education was being evolved for it which would select and adopt the best form of modern institutions already in existence.

The Grant Medical College.

H.E. the Governor of Bombay on March 30th performed a series of ceremonies at the Grant Medical College in the compound of the Sir Jamsetji Jeejeebhoy Hospital. The occasion was the annual prize-giving to successful students of the Medical College, and the opportunity was taken of His Excellency's presence to have the buildings erected in connexion with the college and hospital formally declared open. In so doing the Governor said he could not help noticing that in India the obtaining of a degree of any kind was regarded too often as the primary object which, if attained, should open the door to lucrative employment without expenditure of too great exertion, and if such employment was not forthcoming there was a tendency to throw the blame on the Government. He believed that a degree was only a guarantee of a certain minimum of attainment and that the real work of life began afterwards. In India, as in all other countries, a graduate must show what he had in him and must win success, not by passing examinations only, but by actual work done. Competition in the medical profession was keen in Bombay, and not, as in other countries, between qualified practitioners, but between qualified and unqualified. There was, therefore, all the more reason for students to be able to demonstrate the infinite superiority of skilled to unskilled medical treatment.

April 9th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Medical Evidence.

A JUDGMENT has just been delivered in the High Court of Australia on an appeal from a court below. The plaintiff brought an action for the recovery of an insurance policy on the life of his mother. The defendant was the National Mutual Life Association, and the claim was disputed on the ground that the proponent had not disclosed the true state of her health at the time of proposal. The association sought to uphold its defence by the evidence of Mr. E. T. Thring, F.R.C.S. Eng., of Sydney, but his evidence was rejected by Mr. Justice Hodges on the ground that under Section 55 of

the Victorian Evidence Act the doctor had not obtained the consent of his patient to make any disclosure of facts observed by him or disclosed to him. Judgment was given for the plaintiff in the court below, and against this the defendant appealed. An appeal had already been refused by the State Full Court. The Chief Justice of the High Court said the appellants sought to show that the existence of the complaint causing death must have been antecedent to the date of the proposal. Section 55 of Evidence Act (Victoria) provided that—

> No physician or surgeon shall without the consent of his patient divulge in any civil suit action or proceeding (unless the sanity of the patient be the matter in dispute) any information which he may have acquired in attending the patient and which was necessary to enable him to prescribe or act for the patient.

His honour thought the word "necessary" must be construed in a wide sense so as to include any information which was or was likely to be relevant in determining the proper treatment of the patient. The question to be solved depended upon the construction to be given to the terms "information acquired" "in attending" and "to enable him to prescribe or act." The appellants, while not disputing that the words "information acquired" were capable of the meaning put on them by the State Supreme Court and by most of the American courts, contended that it was not the only nor the most probable meaning. They pointed out that at common law communications between a patient and his medical adviser were entirely unprivileged, and that this state of the law had been often animadverted upon by learned judges. It did not appear, however, that in any of the cases referred to the confidence which was necessarily violated in the witness-box related to any physical fact disclosable by ocular observation or even to the statement as to the health of the patient. The section plainly protected "information" which was relevant to health. Giving the fullest weight to all the arguments for appellants on the word "information," a further difficulty was raised by the word "acquired," which suggested sources of information not limited to communications, verbal or demonstrative, from the patient. He (his honour) was reluctantly compelled to the conclusion that he could not see any satisfactory ground for so limiting its meaning. What, then, was the limitation imposed by the words "in attending the patient"? He did not think that the mere fact that a physician or surgeon prescribed for or operated on a human being necessarily constituted that human being his patient within the meaning of the section. In his opinion the words connoted a period co-extensive with the continuance of the relation of personal confidence which might be assumed to exist between the physician and patient. Whether that relation ever existed, or, having existed, still continued at any particular moment, was in every case a question of fact. In the case of a person who undergoes an operation at a public hospital when the necessity and nature of the operation have already been decided upon, he did not think that the person operated upon was necessarily, within the meaning of the section, the patient of the surgeon who there saw him for the first time. Such a surgeon was, therefore, not necessarily prohibited from divulging what he saw in the course of the operation. He thought that it was very likely Mr. Thring could have given some evidence which would have been admissible under the statute; but, on the whole, he did not think that the attention of the learned judge was drawn to any distinction between facts discovered by observation, and not necessary to enable the witness to prescribe or operate, and facts which were necessary for that purpose. Possibly the evidence would still have been rejected, even if that distinction had been made, since the objection taken was assumed to cover the whole ground. In view of the facts, and the fact that evidence on the point of probability had already been given on both sides, he found himself unable to say that he thought any substantial wrong or miscarriage was occasioned by reason of the rejection of the evidence. He was not able to import a limitation of the prohibition to the lifetime of the patient; and even if executors could give consent—a point on which he reserved his opinion—it was not given in the present case. Mr. Justice Barton, Mr. Justice O'Connor, Mr. Justice Isaacs, and Mr. Justice Higgins also delivered separate judgments, and the court unanimously came to the conclusion that the appeal should be dismissed, with costs.

Children's Hospital, Sydney.

The thirtieth annual meeting of the supporters of the Royal Alexandra Hospital for Children, Sydney, was held on March 17th, under the presidency of Mr. C. P. B. Clubbe. During the year a nurses' home had been opened by Lady Dudley. The number of in-patients had been 1721 for the year, with a mortality of all cases of 10·7. In the outdoor department 13,436 new cases were treated, and attendances totalled 46,381.

New Medical School.

The arrangements for admitting St. Vincent's Hospital as a recognised clinical school in the University of Melbourne have been completed, and the new pathological wing was opened by Sir John Madden on March 20th. It is generally admitted that for its size (about 120 beds) St. Vincent's is equal to any modern hospital in any part of the world for equipment and excellence of design.

Curious Action.

An action for damages was heard before Mr. Justice Pring in Sydney which presents some unusual features. The plaintiff was a pupil at the Marrickville State School, and was one of a class in elementary chemistry being taught by the headmaster. One day, in commencing a chemistry lesson, the headmaster called to another boy to bring a tumbler from his room. This vessel contained a small quantity of brownish liquid, and the boy, thinking it was dirty water, threw it out. The liquid proved to be diluted sulphuric acid, some of which struck the plaintiff in the right eye, causing what was alleged to be permanent injury. It was submitted that the headmaster was guilty of negligence in not warning his messenger of the dangerous nature of the contents of the tumbler. The jury returned damages against the master for £431 0*s.* 9*d.* During the hearing the question of non-liability of the Government in the case of a school teacher was raised, and Mr. Justice Pring, while regarding it as important, preferred to leave the case to a jury. A stay of proceedings was granted till next term.

Provision for Consumptives.

The Victorian Government intends to proceed with a scheme for providing an institution for the relief of advanced cases of consumption. At a recent conference of municipalities Dr. B. Burnett Ham explained that although some municipalities wished to make their own provision, the proposal to have one hospital for advanced cases was to be commended for its financial economy. The Government had spent £7410 during the last two years on the existing sanatoriums at Greenvale, Amherst, and Daylesford. These were for incipient cases. The advanced cases were the foci of infection. If any progress was to be made such cases would have to be gathered up and isolated. He stated that he was prepared to compel any municipality to join in the scheme for financing the proposed new hospital, and if within three months there were any who still objected he would know what to do. A vote of thanks was accorded to Dr. Ham for his assistance to the conference.

Miners' Phthisis.

A conference was called by the Mayor of Bendigo to consider the above question. Mr. C. B. Gaffney advocated the following points: (1) that miners should be put under the control of the Board of Public Health; (2) insistence of proper ventilation of mines; (3) absolute insistence on spraying to keep down dust; (4) inspection of men as to fitness for work; and (5) proper attention to dwellings. Mr. O. Penfold recommended (1) early reporting of infection; (2) better conditions in mines; (3) instruction of children; and (4) sanatoriums. Dr. W. Summons said that absolute prevention of dust was the most important thing to bring about. More inspectors were required. The only person that could be dealt with above was the infected miner. Institutional treatment should be established. Mr. H. E. Jackson wanted a distinction drawn between tuberculosis and "miners' disease." The latter should be regarded as an industrial disease, and if treated as such much benefit would result. Resolutions were carried advocating the provision of spraying apparatus and more inspectors, and also the establishment of a sanatorium, and an executive committee was appointed to further the matter.

Talbot Epileptic Colony.

The annual meeting in connexion with this colony

was presided over by Sir T. Gibson Carmichael, Governor of Victoria. It was stated that the number of colonists was 51, the sexes being almost equally divided. The honorary medical officer said that the greatly improved condition of many of the inmates justified the existence of the institution, and he urged the need of a children's ward. Dr. J. W. Y. Fishbourne said it was estimated that there were 5000 epileptic children in the State for whom nothing had been done. Public subscriptions had only amounted to £189. The colony has been three years in existence.

March 22nd.

Obituary.

STEWART LOCKIE, M.D. EDIN., L.R.C.S. EDIN.,

CONSULTING PHYSICIAN TO CUMBERLAND INFIRMARY.

WE regret to record the death of Dr. Stewart Lockie, which took place at his residence at Stanwix on April 18th. Dr. Lockie was born in London in the year 1836, and while still at an early age his parents, who were of Scottish descent, returned to Berwickshire. At Earlston, and afterwards at Kelso Grammar School, Dr. Lockie received his early education, and on leaving the latter institution he was apprenticed to a medical man at Kelso. In 1854 he entered the University of Edinburgh, where he came under the influence of Simpson, Goodsir, Christison, and Syme. It was while at the University that he made the acquaintance of Sir Thomas Grainger Stewart, an acquaintance which ripened into a lasting friendship. In 1858 he took the M.D. degree of his University and also became a Licentiate of the Royal College of Surgeons of Edinburgh. Immediately afterwards he was appointed house surgeon to the Carlisle Dispensary, which position he held for three years. While there he was much struck with the ignorance of the people with whom he came into contact, and in consequence opened night classes in the central schools, where for more than a year he taught the "three r's" to the working men of the city. In 1861 he commenced private practice and four years later again renewed his connexion with the dispensary by becoming honorary visiting surgeon. Subsequently he became physician to the Cumberland Infirmary, the welfare of which institution was his constant care. Previous to 1873 the wards were small and overcrowded, and the building could scarcely accommodate 40 persons, although it was nominally intended for 50. Under Dr. Lockie's supervision the buildings were enlarged, and as a consequence additions were made to the medical and the nursing staffs. In 1897 Dr. Lockie resigned from the office of honorary physician, and the governors of the institution, in order to mark their appreciation of his services, elected him consulting physician. In 1901, when he retired from active practice, he was elected a vice-president and received many tokens of esteem from his professional brethren and his patients. Perhaps no better proof could be afforded of the esteem in which he was held by his colleagues than the dinner given on the occasion of his resignation of the post of physician to the infirmary. Many of his colleagues came long distances to do honour to their former chief—"dear old Lockie," as he was affectionately called. An original member of the Cumberland and Westmorland Branch of the British Medical Association on its foundation in 1868, he acted for two years as secretary of the branch, and in 1877 was elected its President. When in 1896 the British Medical Association held its annual meeting in Carlisle Dr. Lockie acted as Vice-President of the Section of Medicine.

A man of keen sympathy with sickness and suffering, and with a high conception of his duties and responsibilities, he earned for himself a name which will long remain a household word, not only in Carlisle, but in the districts for miles around. In private life he was gentle and unassuming, and his influence with young men, especially those in his own profession, was very great. The remains of Dr. Lockie were interred on April 21st by the side of those of his wife in Carlisle Cemetery, when a large gathering of medical men from the surrounding districts attended the funeral service.

PETER YOUNG, L.R.C.S. EDIN.

THE death occurred at his residence at Dundee, on April 19th, of Mr. Peter Young, who for many years occupied a leading position in the medical profession in Dundee. Mr. Young, who had attained the age of 84 years, lived an active life, and many will learn with a shock of his death. He was born in Balnaguard, Strathtay, in 1827. He became L.R.C.S. Edin. in 1856 and for some time thereafter assisted a medical practitioner in the North of England. His health giving way, however, he returned home again for a brief rest. Beginning work again he started practice at Erroll, in the Carse of Gowrie, where he remained for some years. He subsequently, in 1860, removed to Dundee, where he continued to practise until a few years ago. By his professional skill and cheery disposition he soon built up an extensive practice, chiefly amongst the middle and working classes. His popularity increased as the years went on, and in the city generally he was held in high esteem. He was perhaps one of very few in Dundee who could not only read and write but speak the Gaelic language, and he was chief of the Dundee Highland Society when the Mod was held there under the presidency of the Duke of Argyll. He also took a keen interest in public affairs and for some years was a member of the old parochial board. Religious, philanthropic, and temperance organisations also received his support and sympathy, and his labours in that direction indicated his desire to do what he could for the moral and material betterment of the community. He was a Free Churchman since the disruption, and was ordained to the eldership in 1850, repeatedly attending the general assembly as a representative elder.

Mr. Young retired from practice a few years ago and was in the enjoyment of excellent health up to a few days before his death. He was predeceased by Mrs. Young about five years ago, but is survived by a family of two sons and one daughter. One of the former is Mr. Charles Young, who carries on the practice in Dundee, and the other is Mr. J. McLauchlan Young, lecturer on veterinary hygiene in the Aberdeen and North of Scotland College of Agriculture.

ALONZO HENRY STOCKER, M.D. ST. AND., M.R.C.P. LOND., M.R.C.S. ENG., L.S.A.

Dr. Alonzo Henry Stocker died on April 24th at his residence, Craigweil, Aldwick, Sussex, in his eighty-first year. Dr. Stocker, who was for many years one of the best known specialists in lunacy, received his professional education at the London Hospital, where, as a student, he won the gold medals for surgery, midwifery, chemistry, anatomy and physiology, and materia medica and therapeutics; also the silver medals (senior prize) for botany and forensic medicine. He was awarded the first honorary certificate for medicine and the surgical gold medal presented by the governors of the London Hospital for attention to the patients of that institution. He also won the second prize in botany awarded by the Apothecaries' Society of London. In 1851 he took the diploma of L.S.A., and in the following year that of M.R.C.S. Eng.; in 1855 he graduated as M.D. of the University of St. Andrews, and in 1860 he was admitted M.R.C.P. Lond. In 1852, at the age of 22 years, he became medical superintendent of Grove Hall Asylum, Bow, in the east of London, at that time the largest private lunatic asylum in the country. Later he became proprietor of two other asylums in London—namely, Peckham House, Peckham, S.E., and Northumberland House, Finsbury Park, N. He was a life governor of Bethlem Royal Hospital and a member of many medical societies. He retired from active work about ten years ago.

BRIGHTON SCHOOL CANTEENS.—The work of the school canteens at Brighton has justified their existence. This is shown by the report which the school medical inspector, Dr. J. Lambert, has just presented to the education committee. During the year ended March 31st last only 5 per cent. of the children on the books of the elementary schools of the town were fed, against 8 per cent. in the previous 12 months; and of 148 children who were recommended for meals on medical grounds 23 per cent. were brought over the average weight for a given height and are no longer eligible for free meals on medical grounds. The total sum expended on food during the year amounted to £216. The work of the canteens has shown unmistakably how the physical and psychical sides of the young are intimately connected. It is not only cruel but futile to attempt to teach the underfed or the starving.

Medical News.

UNIVERSITY OF OXFORD: POST-GRADUATE COURSE ON OPHTHALMOLOGY: THE OPHTHALMOLOGICAL CONGRESS.—The annual course on ophthalmology has been arranged from June 27th to July 8th. The main idea of the course is to demonstrate (on actual patients as far as possible) the whole range of ophthalmology, in order to make the reading of a text-book more profitable than can be the case when relying merely on pictures. The first part will be mainly devoted to demonstrating the practical examination of eye patients, the use of the ophthalmoscope, and the work of refraction. During the second part the work will be more specialised, and the lectures delivered by various ophthalmic surgeons.—The ophthalmological congress this year will meet on Wednesday evening, July 20th. 150 rooms will be available in Keble College for the first applicants, and will be allotted in order of application. About 120 names have already been received as foundation and original members of the congress, and Mr. Sydney Stephenson, honorary secretary, 33, Welbeck-street, London, W., will receive further names of original members until June 24th. There is no annual subscription, but half a guinea entrance fee will be charged and half a guinea on each occasion that a member shall attend the congress. The programme of the congress will be sent out later to those who have sent in their names for membership. The special features of the congress will be operations for cataract and glaucoma. Operations will be performed by, amongst others, Professor Lagrange (Bordeaux), Professor Holth (Christiania), Professor Heine (Kiel), and Colonel H. Herbert (Nottingham), who will each perform his operation for glaucoma. Sir Anderson Critchett will operate for cataract, and Major H. A. J. Gidney, I.M.S., will perform the intracapsular cataract extraction practised by Major H. Smith. It is not proposed to have papers and discussions, but a series of demonstrations and exhibitions. Anyone who would care to show something, give a demonstration, or perform some operation should apply to Mr. R. W. Doyne, Margaret Ogilvie Reader in Ophthalmology, who will make all arrangements for the purpose. In the case of an operation the surgeon should bring his own patient, who will be accommodated in the hospital. Any further information may be obtained from Mr. Doyne, 30, Cavendish-square, London, W.

THE BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—An extra dinner of this association was held at the Trocadéro Restaurant on April 29th, and was attended by 33 members and their guests, among those present being the President (Dr. R. Paramore), Dr. W. S. A. Griffith, Dr. C. Ogle, Dr. Wickham, and the honorary secretary, Dr. Arthur Haydon. The President, in giving the toast of "The Visitors," referred to the work which had been carried out by Dr. Griffith when President of the Medical Defence Union, and also coupled the names of Dr. Ogle and Dr. Wickham with the toast. These three gentlemen having responded, "The Brussels Medical Graduates Association" was proposed by Dr. Ogle. In reply Dr. Haydon said that this dinner had been organised in order to consider plans for holding the annual meeting and dinner this year at Brussels in the Brussels Exhibition of 1910, probably in August. There were now about 800 British graduates of the University of Brussels in all parts of the world, and the number was steadily increasing, for the number of colonial and foreign members was growing rapidly. They were becoming a very strong body. He thought that an annual meeting in Brussels would draw the attention of the King of the Belgians to the existence of the association, and the work it was doing for the University of Brussels, while the fact that the Queen of the Belgians was herself a lady doctor might lead their Majesties to become patrons of the association. He said that as a result of a visit to Brussels last year to advocate certain reforms with regard to the admission of candidates for the degree all the proposals made had since been carried out by the University. Dr. Wickham proposed the health of the President. The President suitably responded. A programme of music was rendered by Miss Dorothy Wiley (soprano), Miss Madalaine Marshall (pianist), Dr. Arthur Haydon (solo violin), and Dr. Maughan (pianist).

Lord Howard de Walden will preside at a Festival Dinner in November next to celebrate the 125th anniversary of the St. Marylebone General Dispensary, commonly called the "Welbeck Dispensary." Opportunity will be taken to create a fund to meet pressing needs and to relieve the charity of the burden of an old-standing rebuilding debt. The last dinner was held at the Centenary celebration 25 years ago.

RESIGNATION OF A MEDICAL OFFICER.—At a meeting of the Lincoln city council on May 3rd the health committee reported that it had received a letter from Dr. C. Harrison resigning his appointment as medical officer, which he had held for 44 years, and it had accepted the same and placed on record its very great appreciation of the industrious and most capable service rendered by him to the city. The committee recommended that Dr. Harrison be appointed consulting medical and sanitary adviser to the corporation at a salary of £50 a year, and this was agreed to.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND: SOUTH-EASTERN DIVISION.—A successful meeting of the South-Eastern Division of the Medico-Psychological Association was held at Hanwell Asylum on April 26th, and was attended by a large number of the members of the division. After the wards of the historic building had been inspected the members were entertained to luncheon by Dr. Percy J. Baily, the medical superintendent. Subsequently, at the meeting of the division, Dr. Baily read a paper giving an account of the history of the institution, with special reference to the time when Conolly put into practice his humane ideas of non-restraint in the treatment of the insane. Papers were also read by Dr. H. Devine on Kraepelin's clinic and by Dr. Phillips on the treatment of Melancholia by the Lactic Acid Bacillus.

THE Manchester and District Cambridge Graduates' Medical Society was formally constituted on April 27th, at a meeting held at the Queen's Hotel, Manchester. Its object is to forward the interests of the University of Cambridge and to encourage intercourse between Cambridge medical men in the district. After the meeting, at which the scope and rules of the society were considered, a dinner was held at which 27 members, 4 associates (Cambridge medical students who are finishing their course in Manchester), and 8 guests were present. Speeches were made by the Rev. Peter Green, Dr. H. R. Hutton, Dr. G. R. Murray, Mr. E. D. Telford, and the president, Dr. A. Godson. Sir Clifford Allbutt, the Regius professor of physic in the University, was unfortunately unable to be present. Dr. Murray was elected vice-president for the ensuing year. It is hoped that all Cambridge men in the district will be able to join and so strengthen the tie to their old University.

CENTRAL MIDWIVES BOARD.—A special meeting of the Central Midwives Board was held at Caxton House, Westminster, on April 26th, with Dr. F. H. Champneys in the chair, at which the Bill to amend the Midwives Act, 1902, was considered. According to the memorandum the Bill is for the most part founded upon the report of the Departmental Committee appointed to consider the working of the Midwives Act, 1902 (1909, Cd. 4822), but departs from the recommendations of that committee in one or two details. The effect of the reconstitution of the Central Midwives Board will be to increase the number of the Board from 9 to 13 members, representation being given to the following bodies, who were previously unrepresented: the Local Government Board, the Association of Municipal Corporations, the Society of Medical Officers of Health, and the British Medical Association. The member appointed by the last-mentioned association must be a medical practitioner. No special qualification is prescribed in the case of the members appointed by the other new bodies. In addition to this increase in numbers, the qualifications of the members appointed by the Incorporated Midwives Institute and the Royal British Nurses Association will be altered. In the future the members appointed by these bodies must be certified midwives. At present the member appointed by the Incorporated Midwives Institute must be a medical practitioner, whilst with respect

to the member appointed by the Royal British Nurses Association no special qualifications are required. The payment of fees of medical practitioners called in on advice of midwives was then considered. Clause 17, under which this subject is regulated, runs as follows:—

(1) Where a duly qualified medical practitioner has been summoned upon the advice of a certified midwife attending a woman in child-birth to render her assistance in a case of emergency in pursuance of any rule framed by the Central Midwives Board, he shall, subject to regulations to be made by the Local Government Board, be entitled to recover from the board of guardians of the Poor-law union in which the woman resided such fee in respect of his attendance as may be fixed by those regulations. (2) The payment of such fees may, if the board of guardians think fit, be treated as relief by way of loan and be recoverable accordingly. (3) Every board of guardians shall in each quarter send to every local supervising authority concerned a list of the cases within the area of the authority in respect of which fees have been paid by the board of guardians under this section.

The clause was approved by the Central Midwives Board.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—A council meeting of this association was held at the Holborn Restaurant on April 28th, and in the unavoidable absence of Dr. F. G. Crookshank Dr. Rashell T. Davison was voted to the chair. The treasurer (Mr. E. G. Gibbs-Smith) reported that many new members had joined the association since the last meeting of the council, and that there was a good balance in hand after all the expenses had been paid. The secretary (Mr. D. A. Belilios) stated that Mr. F. E. Fremantle, county medical officer of health of Hertfordshire, would read a paper in the Public Health Section of the British Medical Association on the Influence of Part-time Medical Officers of Health on Public Health, and the council expressed the hope that the section would be well attended. It was noted that the Rochdale, Richmond, and Salford divisions of the British Medical Association would instruct their delegates to vote for the rescission of Minute 234 at the representatives' meeting, and that the Salford division would move:—

That in every form of public medical service the system of part-time appointments of medical practitioners should be maintained as far as such appointments can be made consistently with the requirements of the services, and that all public medical officers should be protected in carrying out their duties, should be secured from capricious dismissal or reduction of salary, and should be allowed to participate in any superannuation scheme approved by a Local Government Board.

It was decided to recommend those members who belong to both associations to move so that this resolution would be supported by their delegates at the representative meeting of the British Medical Association. Dr. Davison informed the meeting that a paper was to be read at the meeting of the Urban District Councils Association next July on the Advantages of the Present Part-time Public Health Service.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Spring Recess.

PARLIAMENT has adjourned until Thursday, May 26th. No extended holiday was taken by the House of Commons at Easter owing to the financial situation.

Medical Men and the Finance Act.

The Finance Act for 1909–1910 has now become law. It is a complicated measure extending to a hundred pages. In one particular a concession is made to medical men. Whilst the Budget was last year passing through the House of Commons the CHANCELLOR of the EXCHEQUER recognised that, on the grounds of public convenience, it was inadvisable to discourage the use of motor-cars by medical men in their practice. Accordingly he agreed to introduce into the Bill a provision that if a medical man proved that any motor-car kept by him was kept for the purpose of his profession only half the ordinary duty should be paid in respect of it. As the following is the ordinary scale imposed by the Act, the extent of the remission can be seen at a glance:—

	£	s.	d.
Not exceeding 6½ horse power	2	2	0
Exceeding 6½ but not exceeding 12 horse power ...	3	3	0
,, 12 ,, ,, 16 ,, ,, ...	4	4	0
,, 16 ,, ,, 26 ,, ,, ...	6	6	0
,, 26 ,, ,, 33 ,, ,, ...	8	8	0
,, 33 ,, ,, 40 ,, ,, ...	10	10	0
,, 40 ,, ,, 60 ,, ,, ...	21	0	0
Exceeding 60 horse power	42	0	0

In each case the medical man will pay half those rates.

By the Act a duty of threepence per gallon is levied on motor spirit. Under Clause 85 and Part I. of the fifth schedule a rebate of one-half the duty is made on the motor spirit used for the purpose of supplying motive power to "a motor car kept by a duly qualified medical practitioner while it is being used by him for the purposes of his profession."

Vivisection (Abolition) Bill.

Mr. HODGE'S Vivisection (Abolition) Bill has been printed. It lays down that "it shall not be lawful to subject any animal to vivisection—that is to say, to perform on any live animal, with or without the use of anæsthetics, any experiment or demonstration or inoculation of a nature to give pain or suffering either directly or in its after effects for any pathological, surgical, physiological or other scientific purpose, or for the acquirement of manipulative skill."

Education (Physical Training) Bill.

Mr. FREDERICK WHYTE has introduced into the House of Commons a Bill "to provide for physical training in elementary and other schools." It was read a first time. The Bill is backed by Mr. S. BUTCHER, Mr. RODEN BUXTON, Mr. EDMUND HARVEY, Mr. GEORGE ROBERTS, and Mr. WHITEHOUSE.

The Chairs of Clinical Medicine and Clinical Surgery at Glasgow University.

A Bill to confirm a Provisional Order relating to Glasgow University (chair of Clinical Medicine and chair of Clinical Surgery) has been presented in the House of Lords.

Coroners Law and Death Certification Bill.

Sir WILLIAM COLLINS has introduced into the House of Commons a Bill designed to "amend the law relating to Coroners' Law and the Certification and Registration of Deaths and Burials." It was read a first time. The Bill is backed by Colonel LOCKWOOD, Sir PHILIP MAGNUS, Sir LUKE WHITE, Dr. A. P. HILLIER, Dr. W. A. CHAPPLE, and Mr. O'GRADY.

HOUSE OF COMMONS.

WEDNESDAY, APRIL 27TH.

Forcible Feeding.

Mr. HUGH LAW asked the Secretary of State for the Home Department whether he would now favourably consider the holding of an inquiry into the practice of forcible feeding in prisons and asylums.—Mr. CHURCHILL replied: If the honourable Member considers that any improvement can be effected in the methods employed in asylums and prisons for administering food to persons who refuse to take food naturally and gives me his reasons for thinking so I will consider whether further inquiry in the matter is desirable; but at present I do not know to what end such an inquiry should be directed. The methods now employed are, I believe, those recommended by the highest medical authorities, and I know of no reason for modifying them.

Mr. KEIR HARDIE: Is the right honourable gentleman aware that quite recently—in fact, within the last fortnight—a man who had been forcibly fed subsequently died suddenly and the cause of death was held to be largely due to the forcible feeding employed? If so, does the right honourable gentleman not consider the case one for inquiry?

Mr. CHURCHILL: I do not recognise in any of the cases that have come before me one that answers to the description given by the honourable gentleman. If he knows of such a case and will give me the facts I will consider it.

Mr. KEIR HARDIE: I will send the facts to the right honourable gentleman.

Chinese Pork.

Mr. HAMILTON BENN asked the President of the Local Government Board what quantity of Chinese pork was refused admission into ports of the United Kingdom during March, 1910; upon what grounds was this admission refused; and whether he could state what became of these carcasses.—Mr. BURNS replied: So far as my information goes, some 16,800 carcasses which arrived during last month did not comply with the foreign meat regulations and were re-exported. As to the last portion of my question, perhaps I may be allowed to refer the honourable Member to my replies to similar questions on this subject.

Mr. GIBSON BOWLES: What were the grounds on which they were refused?—Mr. BURNS: They were refused, not because they were unsound or unfit for food, but because they did not comply with the foreign meat regulations under the Food Regulations Act, which stipulate that the carcasses should be imported whole. It was because the backbones were taken out and did not comply with that condition that the carcasses were rejected, and for that reason only.

The Departmental Committee on Coroners.

Sir WILLIAM COLLINS asked the Secretary of State for the Home Department whether he proposed to introduce legislation during the present session to give effect to the recommendations of the Departmental Committee appointed to inquire into the law relating to coroners and coroners' inquests, and into the practice of coroners' courts.—Mr. CHURCHILL wrote, in reply: I have now under my consideration two valuable reports made by this committee, but I fear that as matters now stand I cannot give any pledge as to when it will be possible to propose legislation to carry out its recommendations.

The Cowsheds and Dairies Order (Ireland).

Mr. FRANCIS MEEHAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether he would state how many unions in Ireland had adopted the Cowsheds and Dairies Order; and whether the Local Government Board had in any particular instance taken legal proceedings to enforce the same.—Mr. BIRRELL (by written answer) replied: Arrangements for the administration of the Order have been made in 129 rural and 80 urban districts. Legal proceedings to enforce the Order are pending in two instances.

The Medical Officer of Skibbereen Dispensary District.

Mr. GUINEY asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that the Skibbereen, county Cork, Board

of Guardians, on Jan. 19th, 1910, unanimously elected as medical officer of the Skibbereen dispensary district Dr. Michael Burke; whether he was fully qualified for the position; and whether, seeing that the Skibbereen Board of Guardians had twice since the election unanimously requested the Local Government Board for Ireland to sanction the appointment, he would say for what reasons the Local Government Board had refused their sanction.—Mr. BIRRELL wrote in reply: Dr. Burke is at present medical officer of Union Hall dispensary, and has been elected to the vacant medical officership of Skibbereen dispensary. The Board have not sanctioned his transfer, as legal proceedings are being taken with respect to the medical officership of the Skibbereen workhouse, to which Dr. Burke also claims to have been appointed. The Board are awaiting the result of these proceedings, as they do not consider that one medical officer should hold both the dispensary and the workhouse hospitals.

Tuberculous Cows.

Mr. REES asked the Parliamentary Secretary to the Board of Agriculture whether he was aware of the opinion held by rural district councils that provision should be made by law for the payment of reasonable compensation to dairy farmers for loss caused by any proceedings or action of any authority acting under the powers of any Acts of Parliament or Orders made thereunder, relating to milk from cows suffering or suspected to be suffering from tuberculosis, and that the refusal of such compensation, besides being in itself a hardship to dairy farmers, tended to operate against the beneficial working of such Acts and Orders and the prompt detection and eradication of tuberculosis in cattle; and whether the Board of Agriculture proposed that such compensation should be awarded from the Imperial Exchequer, and not from local rates.—Sir EDWARD STRACHEY (in a written answer) replied: Yes; the Board are well aware of the views held by rural district councils on this matter. It would, however, be necessary to introduce legislation to give effect to them, and the Board are not at present in a position to do so, as it would not be practically uncontroversial.

THURSDAY, APRIL 28TH.

The King of the Belgians and Tropical Diseases.

Mr. REES asked the Under Secretary of State for the Colonies whether the Secretary of State had information to the effect that the King of the Belgians had made a large grant of money for the investigation of sleeping sickness and other tropical diseases.—Colonel SEELY replied: I understand that the King of the Belgians has granted 1,000,000 francs for the Service de l'Hygiène in the Congo to be specially devoted to combating sleeping sickness, and 500,000 francs for the construction of native hospitals.

Medical Practitioners and the Midwives Act.

Mr. HENRY WALKER asked the President of the Local Government Board, with reference to the payment of the medical practitioner called in on emergency under the Midwives Act, whether this payment was being made in some places by the local sanitary authority, under Section 133 of the Public Health Act, and in others by the board of guardians, under Section 2 of the Poor-law Amendment Act of 1848; whether any such payment had been disallowed by the district auditor; whether the law officers of the Crown had advised that a board of guardians had any authority, in the absence of an application for parochial relief, to make the payment otherwise than under Section 2 of the above-mentioned Act of 1848; whether, when the payment was made under that section the board of guardians was entitled to recover the amount from the patient or her husband; whether he was aware that some boards of guardians are attempting to recover the amount disbursed under these circumstances to the great hardship of poor persons; and whether he would make publicly known the fact that boards of guardians were not legally entitled to recover such sums.—Mr. BURNS wrote in reply: I understand that in two or three cases payments of the kind referred to have been made by the local sanitary authority under Section 133 of the Public Health Act, 1875, and I believe some boards of guardians have made similar payments under Section 2 of the Poor-law Amendment Act, 1848. I do not find that any such payments have been disallowed by the district auditor. I have not found it necessary to consult the law officers of the Crown on the subject, but I may say that the Board are advised that payments to medical practitioners under Section 2 of the Act of 1848 in such circumstances as are here in question could not be recovered as relief on loan. My attention has only been called to one case of complaint that the guardians were unduly pressing for repayment. The question of my honourable friend and my reply will no doubt give publicity to the matter, and it does not appear to me to be necessary to adopt the course suggested in the last part of the question.

Sir WILLIAM COLLINS asked the right honourable gentleman whether, under the Midwives Act, 1902, or under any rules made thereunder, it was obligatory on a midwife to notify a medical practitioner that his attendance was in certain abnormal cases required; and whether, in the event of payment of such practitioner by the local authority, such payment was deemed to be parochial relief.—Mr. BURNS (by written answer) replied: Under Rule 18 of the rules framed by the Central Midwives Board, and approved by Order of Council of April 24th, 1907, it is the duty of the midwife, in certain specified circumstances of danger, to represent to the husband or the nearest relative or friend of the patient that a medical practitioner should be summoned, and to fill in the requisite form to that effect. The question whether payments made by a local authority would be parochial relief will depend largely on the circumstances of the case.

BOOKS, ETC., RECEIVED.

APPLETON, D., AND CO., New York and London.
Surgical Diagnosis. By Alexander Bryan Johnson, Ph.B., M.D. Three volumes. Price, cloth, £3 15*s.* net.
Preparatory and After Treatment in Operative Cases. By Herman A. Haubold, M.D. Price, cloth, 25*s.* net.
The Conquest of Disease through Animal Experimentation. By James Peter Warbasse, M.D. Price 4*s.* net.

BAILLIERE, J. B., ET FILS, Paris.
Bibliothèque de Thérapeutique. Publiée sous la Direction de A. Gilbert et P. Carnot. Crénothérapie, Climatothérapie, Thalasso thérapie. Par le Prof. L. Landouzy, Les Professeurs Armand Gautier, Moureu, De Launay, et les Docteurs J. Heitz, Lamarque, Lalesque, et P. Carnot. Price not stated.

CURRIE, JOHN, Edinburgh.
Manual of Medical Jurisprudence, Toxicology, and Public Health. By W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E., F.R.S.E. Second edition. Price 8*s.* net.

FROWDE, HENRY, AND HODDER AND STOUGHTON, London.
Oxford Medical Publications. A System of Syphilis. In six volumes. Edited by D'Arcy Power, M.B. Oxon., F.R.C.S., and J. Keogh Murphy, M.C. Cantab., F.R.C.S. With an Introduction by Sir Jonathan Hutchinson. F.R.S. Vol. IV., Syphilis of the Nervous System. By F. W. Mott, M.D., F.R.S., F.R.C.P. Price £2 2*s.* net per volume, or to subscribers £10 10*s.* net. per set of six volumes.

GRIFFIN, CHARLES, AND CO., LIMITED, London.
A Surgical Handbook. By Francis M. Caird, M.B., F.R.C.S. Edin., and Charles W. Cathcart, M.B., F.R.C.S. Eng. & Edin. Fifteenth edition, revised. Price 8*s.* 6*d.*

LAURIE, T. WERNER, London.
A Year's Dinners. 365 Seasonable Dinners with Instructions for Cooking. By May Little. Price 6*s.* net.
Chats about Astronomy. By H. P. Hollis, B.A., F.R.A.S. Price 3*s.* 6*d.* net.

LEHMANN, J. F., München.
Lehmann's Medizinische Handatlanten. Band XXXVII. Grundriss und Atlas der Speziellen Chirurgie. Von Prof. Dr. Georg Sultan. II. Teil. Price M.16.

LENG, JOHN, AND CO., LIMITED, London and Dundee.
People's Health Guide. A Medical Handbook for the Home. By Robert Watson, M.D. Price 6*d.*

LIVINGSTONE, E. AND S., Edinburgh.
A Text-book of Medical Jurisprudence and Toxicology. By John Glaister, M.D., D.P.H. Camb., F.R.S.E. Price 14*s.* net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta. (CHARITY ORGANISATION SOCIETY, London.)
The Annual Charities Register and Digest. By C. S. Loch. Nineteenth edition. Price 5*s.* net.

MACDONALD AND EVANS, 4, Adam-street, Adelphi, London.
An Elementary Manual of Statistics. By Arthur L. Bowley, M.A., F.S.S. Price 5*s.* net.

SMITH, ELDER, AND CO., London.
An Index of Symptoms, with Diagnostic Methods. By Ralph Winnington Leftwich, M.D. Fourth edition. Price 7*s.* 6*d.* net.

SPRINGER, JULIUS, Berlin.
Die Untersuchung und Beurteilung des Wassers und des Abwassers. Ein Leitfaden für die Praxis und zum Gebrauch im Laboratorium. Von Dr. W. Ohlmüller und Professor Dr. O. Spitta. Dritte, neu bearbeitete und veränderte Auflage. Preis, broschiert, M.12; gebunden, M.13.20.

SWAN SONNENSCHEIN AND CO., LIMITED, London.
The Nature of Cancer. Suggestions for a New Treatment. By John Clay. Price 3*s.* 6*d.* net.

WILEY, JOHN AND SONS, New York. (CHAPMAN AND HALL, LIMITED, London.)
Studies in Immunity. By Professor Paul Ehrlic and his Collaborators. Collected and translated by Dr. Charles Bolduan. Second edition, revised and enlarged. Price $6.00.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.)
Errors of Refraction and their Treatment. A Clinical Pocket-book for Practitioners and Students. By Charles Blair, M.D., F.R.C.S. Second edition. Price 2*s.* 6*d.* net.
"Memories." By A Hospital Nurse. Price not stated.

WRIGHT AND POTTER PRINTING COMPANY, Boston.
Fortieth Annual Report of the State Board of Health of Massachusetts. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ALLEN, W., M.D. R.U.I., has been reappointed Medical Officer of Health and Public Vaccinator to the Shotley District Council.

ANDERSON, WILLIAM, M.B., Ch.B. Aberd., has been appointed House Physician and Surgeon at the Royal Hospital for Sick Children, Aberdeen.

BAXTER, C. B., M.B., Ch.B. Edin., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at the Royal Berkshire Hospital, Reading.

CURRIE, OSWALD JAMES, M.B. Lond., M.R.C.S., has been appointed Honorary Visiting Surgeon to the Wynberg Hospital, Cape Town.

FISHER, J. B., M.D., C.M. Edin., D.P.H., has been reappointed Medical Officer of Health to the Whitehaven Rural District Council.

FRAZER, S., L.R.C.P. & S. Edin., has been reappointed Medical Officer of Health for the Brentwood Urban District.

HASTINGS, SOMERVILLE, M.S. Lond., F.R.C.S. Eng., has been appointed Surgeon to the Ear and Throat Department of the Middlesex Hospital.

MITCHELL, ALAN, M.B., C.M. Aberd., has been appointed Assistant Surgeon to the Royal Hospital for Sick Children, Aberdeen.

MITCHELL, G., M.B., B.S. Aberd., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Insch District of the county of Aberdeen.

PARKER, J. C., M.B., B.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Kilsyth District of the county of Stirling.

PARRY-EDWARDS, O. J., M.B., B.Ch. Dub., has been appointed Medical Officer to the Bodedern District, Public Vaccinator, and Medical Officer to the Valley Workhouse of the Holyhead Union.

ROWLETTE, ROBERT J., M.D. Dub., has been appointed Visiting Physician to Jervis-street Hospital, Dublin.

SHORNEY, HERBERT FRANK, M.D. Melb., F.R.C.S. Eng., has been appointed Honorary Assistant Ophthalmic Surgeon to the Adelaide Hospital, South Australia.

TUBBY, A. H., M.S. Lond., F.R.C.S. Eng., has been appointed Honorary Consulting Surgeon to Christ's Hospital.

YOUNG, T. B., M.D. Brux., M.R.C.S., has been reappointed Medical Officer to the Halesowen Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

BATH, ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with lodging, board, and washing.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund-street.—House Surgeon for six months. Salary at rate of £70 per annum, with board, lodging, and washing.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £170 per annum, with rooms, &c. Also Resident Surgeon for from two to three months. Salary £4 4s. per week, with apartments.

BRIGHTON COUNTY BOROUGH ASYLUM, Haywards Heath.—First Assistant Medical Officer and Pathologist, unmarried. Salary £250 per annum, with apartments, board, laundry, and attendance.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Secretary. Salary £250 per annum, with £100 in lieu of apartments and board.

BRISTOL ROYAL INFIRMARY.—Honorary Medical Registrar.

BRIXTON DISPENSARY, Water-lane, S.W.—Resident Medical Officer, unmarried. Salary £150 per annum, with apartments, &c.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—Honorary Surgeon.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary 40 guineas per annum.

CHESTER, COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, and washing.

DENBIGH, DENBIGHSHIRE INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

DUDLEY, THE GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, attendance, and washing.

FLEETWOOD, ROSSALL SCHOOL.—Resident Medical Officer, unmarried. Salary £250 per annum, with board and residence.

FOLKESTONE, VICTORIA HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GORDON HOSPITAL FOR RECTAL DISEASES, Vauxhall Bridge-road, S.W.—House Surgeon.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and laundry.

HALIFAX, ROYAL HALIFAX INFIRMARY.—Second House Surgeon, unmarried. Salary £100 per annum, with residence, board, and washing.

ITALIAN HOSPITAL, Queen-square, W.C.—Honorary Assistant Physician. Also Honorary Anæsthetist.

JERSEY GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary £100, with board and lodging.

LEICESTER INFIRMARY.—Assistant House Physician and Assistant House Surgeon. Salary at rate of £60 per annum, with board, apartments, and washing.

LEICESTER POOR-LAW INFIRMARY.—Second Resident Assistant Medical Officer. Salary £120 per annum, with rations, apartments, and washing.

LIVERPOOL STANLEY HOSPITAL.—Honorary Surgeon.

LONDON HOSPITAL, Whitechapel, E.—Assistant Surgeon.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—House Surgeon for six months. Salary £50 per annum.

MANCHESTER CORPORATION.—Medical Officer (female) under the Midwives Act, 1902. Salary £250 per annum.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, Cheetham.—Resident Medical Officer (female) for six months. Salary at rate of £80 per annum.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.—Pathologist. Salary £120 per annum, with rooms, &c.

METROPOLITAN DISPENSARY, 9, Fore-street, City.—Medical Man. Salary £175 per annum.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Honorary Physician.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood, Middlesex.—Clinical Assistants for six months.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—Senior House Physician. Salary £50 per annum, with board and residence.

NOTTINGHAM GENERAL HOSPITAL.—Locum Tenens. Salary £45, with board, lodging, and washing.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and washing. Also House Physician. Salary £75 per annum, with board, residence, and washing.

PRESTON, LANCASHIRE EDUCATION COMMITTEE.—Two School Medical Inspectors. Salaries £250 per annum.

PUBLIC DISPENSARY, 122, Drury-lane, W.C.—Resident Medical Officer, unmarried. Salary £105 per annum, with apartments, &c.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Physician.

ROSS AND CROMARTY COUNTY, Dingwall.—Medical Inspector of School Children. Salary £250 per annum, with travelling and other allowances.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Assistant Clinical Pathologist (female). Salary £50 per annum.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Ventnor.—Two Assistant Resident Medical Officers, unmarried. Salary £100 per annum each, with board, lodging, and washing.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Surgeon.

SALISBURY, FISHERTON HOUSE ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and attendance.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £50 per annum, with board, lodging, and washing.

SHEFFIELD, WEST RIDING ASYLUM, Wadsley.—Fifth Assistant Medical Officer. Salary £140 per annum, with board, &c.

SOUTHPORT INFIRMARY.—Junior House and Visiting Surgeon, unmarried, for six months. Salary at rate of £70 per annum, with residence, board, and washing.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior House Surgeon. Salary £100 per annum, with residence, board, and washing.

SOUTHWARK UNION INFIRMARY, East Dulwich-grove, S.E.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY AND FEVER HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician. Salary £75 per annum, with board, washing, and attendance.

TAUNTON, TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and laundry.

TOWER HAMLETS DISPENSARY, Whitehorse-street, Stepney, E.—Resident Medical Officer. Salary £100 per annum, with apartments, &c.

TYNEMOUTH, VICTORIA JUBILEE INFIRMARY, Spring Gardens, North Shields.—House Surgeon. Salary £100 per annum, with rooms, board, &c.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board, lodging, and laundry allowance provided.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, rooms, and laundry

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Elstree, in the county of Hertford; and at West Huddersfield, in the county of York.

Births, Marriages, and Deaths.

BIRTHS.

DUNNETT.—On April 30th, 1910, at 7, Ascott-avenue, Ealing, Agnes Dunnett, M.B. Lond., wife of Lionel Francis Dunnett, of a son.

LOCKYER.—On May 1st, at Harley-street, W., the wife of Cuthbert Lockyer, M.D., F.R.C.S., of a son.

MORISON.—At 1, Claremont-place, Newcastle-upon-Tyne, on April 27th, the wife of Professor Rutherford Morison, of a son.

SPENCER.—On April 29th, at Arrow-road, Alcester, Warwickshire, to Dr. and Mrs. R. H. Spencer, a son.

MARRIAGES.

FORBES—HALL.—On April 30th, at St. Nicholas' Church, Brighton, Dr. Duncan Forbes, Medical Officer of Health, Brighton, to Kathleen Penfold, youngest daughter of Edwin Penfold Hall, Brighton.

DEATHS.

BURY.—On April 23rd, at Wisbech, Edward Charles Bury, M.D.

MORISON.—At 1, Claremont-place, Newcastle-upon-Tyne, on May 2nd, Lull, wife of Rutherford Morison.

WETHERED.—On April 25th, at Kingswood, Surrey, Ernest Wethered, M.D., aged 34 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

PUBLIC HEALTH IN EGYPT.

REPORTS by His Majesty's Agent and Consul-General (Sir Eldon Gorst, K.C.B.) on the condition of Egypt and the Soudan in 1909 were issued as a Parliamentary paper on April 28th. In Egypt the work of the Government hospitals and dispensaries continues to show satisfactory progress. The in-patients treated during the year numbered 37,000, while in the out-patient department a total attendance of over 350,000, including 144,500 new patients, is recorded. Some 33,000 persons have been attended by the district medical officers. The improvement observable during recent years in the quality of the work done is largely to be attributed (the report declares) to the excellence of the course of education at the School of Medicine. The two travelling ophthalmic hospitals (an account of which was given in THE LANCET of April 9th, p. 1013) visited Mansourah, Ghizeh, Beni-Souef, and Luxor during the year, working between them on 442 days. Over 7000 new patients were treated, and the total number of attendances was 100,000, giving an average of 221 per working day in each hospital. More than one-third of those attending for treatment were under 15 years of age. The popularity of the service amongst the fellaheen is of good augury for the future, and it may be hoped that in time some appreciable effect will be produced on the mass of ophthalmia prevalent in the country. At Tantah 5000 new cases were dealt with in the permanent ophthalmic hospital, and there were 77,000 visits by patients under treatment. 1763 major and 2418 minor operations were performed. The ophthalmic hospital at Assiout is nearly finished. The construction of the Mansourah hospital will, it is hoped, be begun this year. Efforts are being made to deal with ophthalmic cases in the Government schools by instructing the teachers, and through them the students, in some of the simple rules of hygiene. The staff of this department is to be reinforced by an English inspector in view of the great increase of work.

The accommodation at the Abbassieh Lunatic Asylum has been raised from 877 beds to 947, and the total will soon be increased to 1007. Good progress has been made with the construction of the new asylum at Khanka. During 1909 546 patients were admitted to the Abbassieh Asylum, 101 cases being due to pellagra and 43 to hashish. An investigation has been instituted into the causes of the former obscure disease, and the work is proceeding on much the same lines as have been proposed in the case of the committee recently formed in London to study the subject.

There was a marked diminution in plague during 1909, especially in the more dangerous pneumonic form. The total number of cases was 513, as compared with 1511 in 1908, while the number of deaths fell from 780 to 207. The special organisation established two years ago in the southern provinces for dealing with the disease has largely contributed towards this satisfactory result. Disinfecting stations with the necessary appurtenances and a competent staff have now been supplied to each Mondirieh. A supernumerary staff of trained disinfectors is kept in readiness at headquarters, and a plague medical staff has been organised ready to proceed at short notice to an infected locality. The campaign waged against plague for the last 10 years has been productive of many indirect advantages in addition to its direct effect in preventing the spread of this terrible scourge.

Last year the death-rate of children under one year assumed unusual proportions in Cairo. The weekly rate, which is about 105 on the average, rose to 130 in the latter part of March, 188 towards the end of April, and 654 in the middle of May. The figures for the next four weeks average 573, the maximum reached being 700. Then came a sudden drop to 248 in July, followed by a further gradual decline till in December the mean of the previous winter was reached. High infant mortality may be observed during the summer in all hot countries, being generally due to digestive troubles, but the immediate cause of the unusually serious outbreak in Cairo last year has not so far been discovered. Careful and thorough investigation is necessary before any definite conclusion can be arrived at. The Lady Cromer dispensaries are endeavouring to instil elementary ideas on the subject of cleanliness and the rational bringing up of children among the poorer classes. It is understood that the Princesses of the Khedivial family have recently decided to establish a society for the protection of infant life.

The anti-mosquito movement in Cairo was first started in 1902, the measures adopted consisting in oiling cesspools, wiring ventilators, putting fish into ornamental waters, and removing stagnant water. These measures have met with a certain amount of success, though not sufficient to permit the disuse of mosquito curtains; in fact, so long as excavations and low-lying spots exist which contain infiltration water during high Nile, mosquitoes will continue to breed in Cairo. No doubt the steps now taken are efficacious within certain limited areas, but a much more effective cure will be the completion of the drainage scheme. In Port Said the anti-mosquito campaign has been carried on in more favourable circumcumstances, and has, owing to the compact area of the town and the absence of infiltration, resulted in a distinct improvement in the conditions of life. The anopheles mosquito is but rarely found in Cairo and Port Said. In Suez and Ismailieh the measures taken to stamp out the anopheles mosquito have, as is well known, produced great improvement in the public health.

During the year 16 students in the School of Medicine obtained their diplomas, one student died, and 17 left; in October 50 new students joined. There are at present 206 students in the School of Medicine and one in the School of Pharmacy. The anatomical department sustained a great loss during the year through the resignation of Professor G. Elliot Smith on his appointment to the chair of anatomy at the University of Manchester. Dr. Bahgat Wahby, an Egyptian, was appointed in his place, and three demonstrators have been added to the staff.

In the Soudan three new hospitals were opened during the year—at Khartoum, Atbara, and Port Soudan. The buildings are satisfactory, but various accessory constructions are still required in the two former. The Soudan medical department has been placed under the direction of Colonel H. B. Mathias, principal medical officer of the Egyptian army. Dr. J. B. Christopherson has been appointed director of the Khartoum and Omdurman civil hospital. The number of out-patients treated increases steadily, and about 140,000 were treated in 1909, as compared with 121,000 in the preceding year. The number of in-patients remains at about 7,000. 41,000 vaccinations were performed during 1909, as against 19,000 in 1908. There was little small-pox in the country, nor has there been any serious epidemic of infectious disease during the year. A report on the subject of sleeping sickness has been furnished by Captain R. G. Anderson, who has been conducting investigations on the boundary of the Bahr-el-Ghazal and the Lado Enclave, and valuable suggestions are made regarding measures of precaution against the introduction of the disease into the Soudan from that quarter. An inquiry has also been instituted into the causes of the obscure and fatal disease known as kala-azar which has in recent years appeared in the Kassala province and on the Blue Nile.

AN OBSTINATE CASE OF NOCTURNAL ENURESIS.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent who asked in your issue of April 23rd for suggestions in the treatment of an obstinate case of nocturnal enuresis of 18 months' duration, the patient being a girl of 18 years of age suffering also from Graves's disease, all the usual remedies having been tried without any permanent success, I feel it would more than likely contribute to the patient's interests and those of her medical attendants were the latter to give an opportunity to hypnotic suggestion. I recommend hypnotic advisedly, for simple suggestion—now so popular an idea possibly because hypnotism is so little understood—would be found to have but transient and insignificant power in such a case. I have observed an instance of Graves's disease appearing to improve under simple suggestion when symptoms and general condition have been treated medicinally and hygienically meanwhile; but I am of opinion that hypnotic suggestion, if properly applied, would effect rapid improvement in your correspondent's case, both as respects the particular disease and the intercurrent urinary disorder. The fact that she sleeps heavily and is awakened with difficulty is interesting and suggests a toxæmia serving to "fill up the cup" of complication and difficulty; but, to my mind, making the probability all the greater that a course of hypnotic treatment would effect a cure all round.

I am, Sir, yours faithfully,

Caterham, April 24th, 1910. HAYDN BROWN.

To the Editor of THE LANCET.

SIR,—In answer to "Wanted Suggestions for Treatment" I have treated a fair number of cases of enuresis by hypnotic suggestion most successfully after other means have failed. I should be very glad to hear from your correspondent on the subject.

I am, Sir, yours faithfully,

75, Warwick-square, S.W., April 27th, 1910. A. G. BUCHANAN.

THE ABUSE OF FIRST AID.

UNDER the title of "The Most Curious Hospital in London Town" the *Graphic* has recently printed a picture of an ambulance station under the steps of St. Paul's Cathedral, in which an officer of the St. John Ambulance Association is surgically treating a man whose dress would suggest that he does not belong to the poorer classes of the community. The letterpress states that the ambulance station was opened in 1890, is open daily, including Sunday, that on all occasions of special services in the Cathedral the permanent attendant is assisted by volunteers of both sexes, and that the total number of cases treated up to date is 8067. The St. John Ambulance Association undoubtedly serves a very important purpose in our crowded metropolis, where accidents must almost inevitably be of daily occurrence, but it is not for the benefit of the public that the work of its officers should extend beyond that of rendering first aid and of promptly removing a patient to a hospital or the house of a medical man. A correspondent informs us, however, that at the station under the Cathedral anyone who chooses to go to th attendant in charge can receive treatment. We are also informed that the attendant when called upon visits any

of the neighbouring buildings. This is certainly going beyond the legitimate scope of the Association, and those responsible for the management of the station in question must see on reflection that with the best of intentions they are doing work which can only be properly done by a medical man.

FROM THE OUT-PATIENT ROOM.

To the Editor of THE LANCET.

SIR,—Perhaps you may find space in your columns for the following—a jewel dropped in the out-patient room at a certain hospital. It seems worthy of preservation. Physician asks the patient, a youth, whether there is anything in his family history worthy of note and receives this remarkable reply: "Please, sir, I've got piles on my mother's side."

We are familiar with the fact that when the fathers have eaten sour grapes the children's teeth are set on edge (presumably Hutchinson's peg-top teeth), but this seems to add new and terrible sequelæ to the constipation of the mothers. I am, Sir, yours faithfully,

C.

WESTON AND HIS WALKS.

IN THE LANCET of April 16th (p. 1112) last we announced the trans-continental walk of Mr. E. P. Weston, a septuagenarian pedestrian, from Los Angeles, California, to New York. He left Los Angeles on Feb. 1st and was due to arrive at the City Hall, New York, on May 17th, the scheduled time to be occupied being 90 days, not including Sundays, when he rests. We now learn that Mr. Weston reached New York on May 2nd, so that he has completed the walk in 77 days, or with 13 week-days to the good.

A CURE FOR BLOOD POISONING.

Kans City, Mo., Mar. 28, 1910.

To the London LANCET, *London, England.*

GENTS,—Pardon me for taking the liberty of addresing you. I am now past eighty-four years old and I am the original discover of a posative cure for blood poison and lock jaw, it has not failed in five cases, four of lock jaw and one of blood poison, three of them the doctors had gave up to dye. I can cure a case incide of thirty minits, it is veary simple and easy to hanble, I do not want it to dy with me, as it is worth thousands of dollars to suffering humanity. I have this month March sent it to the Medical Faculty of New York City, and will send it to Chicago, Ills., also. Now gentleman, I am No doctor and only an old mechanic and veary needy in my old age, most eighty-five years old and nearly blind also. After you make a fare test of my formaly and find that it will do what I say it will cure lock jaw and blood poison in thirty minits time, then if you can then feel like asisting me, make your own price according to your generosity and I will be satisfied. Direct to ——, 333, North Londale, Kansas City, U.S.A. A formuly to cure lock jaw. Get three or four oz. of good smokeing tobacco, brake it upon a paper, then get an iron bucket or stone pot, put into it two or three shovels of live coals of fire, hold the wounded hand or foot two feet above the pot, drop the tobacco on the fire, cover all with a quilt and smoke for thirty minits, and there you are. I am, yours truly,

333, North Londale, Kansas City, Mo., U.S.A. ——.

PHARMACOLOGICAL EXHIBIT AT THE BRUSSELS EXHIBITION.

ONE of the features of the Brussels Exhibition is the imposing exhibition of Messrs. Burroughs, Wellcome, and Co., near the entrance to the Galerie de l'Industrie Britannique. Here are shown the firm's well-known tabloid products, animal substances, and the organic arsenic compounds; and as an instance of the pitch to which the preparation of pharmacological products has attained the fact may be mentioned that this firm when unable to obtain medicinal herbs conforming to a high standard of efficiency grow their own on a large scale.

Doubtful.—We do not think that there is any objection to the course suggested by our corespondent, provided that none but patients on the books are communicated with.

Canvassed has not inclosed his name and address.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 4th, 1910.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
April 28	29·89	S.W.	...	115	61	45	49	53	Cloudy
,, 29	29·91	WNW	0·27	99	54	39	41	45	Cloudy
,, 30	30·23	N.W.	...	85	51	40	42	46	Fine
May 1	30·25	N.	...	81	56	46	48	52	Overcast
,, 2	30·06	N.	0·04	75	53	52	51	53	Overcast
,, 3	30 15	N.	0·25	99	58	40	42	45	Fine
,, 4	29·92	N.W.	0·10	101	53	43	43	47	Cloudy

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

SURGICAL SECTION (Hon. Secretaries—Walter G. Spencer, Jonathan Hutchinson) at the Botanical Theatre, University College, W.C.: at 5.30 P.M.

Discussion:

On the Present Position of the Treatment of Syphilis. (To be continued at the next meeting on June 14th.) Mr. Ernest Lane will open the Discussion, and Sir Jonathan Hutchinson, Dr. Alexander Fleming, Mr. Arthur Shillitoe, Mr. H. W. Bayly, Mr. J. E. R. McDonagh, Dr. F. J. Smith, Mr. C. F. Marshall, Dr. G. Pernet, Mr. Charles Gibbs, and Captain Rennie will take part.

THURSDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—W. J. Gow, G. F. Blacker) at 15, Cavendish-square, W.: at 7.45 P.M.

Papers:

Dr. F. J. McCann: Cæsarean Section in the Treatment of Eclampsia Gravidarum.

Dr. A. J. Wallace; Contribution to the Life History of Fibromyomata of the Uterus.

FRIDAY.

CLINICAL SECTION (Hon. Secretaries: H. D. Rolleston, Albert Carless) at 15, Cavendish-square, W.: at 8.30 P.M.

Dr. Henry Head will give a Demonstration on Clinical Methods for Testing Sensations (illustrated by cases).

Dr. R. G. Hebb: Lympadenoma with Pruritus and Cutaneous Tumours.

Dr. A. C. Firth: A Case of Pink Urine caused by Eating Highly-coloured Sweets.

Dr. R. C. Elmslie: (1) Three Cases of Enlargement of the Tubercle of the Tibia (Schlatter's Disease); (2) A Case of Fracture of the Humerus at the Site of an Innocent Cyst. And other Cases.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8 P.M., Annual Meeting; Election of Officers, &c., for 1910–11 Session. 8.30 P.M., Tropical Diseases to be Demonstrated by the Epidiascope:—(1) Sir Patrick Manson: Malaria; (2) Dr. F. M. Sandwith: Ankylostomum Duodenale and the Entrance of its Larvæ through the Skin into the Human Body; (3) Dr. C. Brown: Tropical Dysentery; (4) Dr. A. W. G. Bagshawe: Sleeping-Sickness.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, S.W.

WEDNESDAY.—4.30 P.M., Clinical Demonstrations.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. G. Pernet: Clinique (Skin). 5.15 P.M., Lecture—Dr. T. Eden: Some Common Difficulties in Forceps Delivery.

TUESDAY.—4 P.M., Dr. P. Stewart: Clinique (Medical). 5.15 P.M., Lecture:—Dr. T. C. Shaw: Suggestion, Hypnotism, and Telepathy.

WEDNESDAY.—4 P.M., Mr. J. Cantlie: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. J. Bland-Sutton: Injuries of the Heart.

THURSDAY.—4 P.M., Dr. J. Mackenzie: Clinique (Medical). 5.15 P.M., Lecture:—Mr. J. Clarke: Internal Derangements of the Knee-joint.

FRIDAY.—4 P.M., Dr. W. Hill: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Davis: Diseases of the Throat, Nose, and Ear.

TUESDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 10.30 A.M., Demonstrations in Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Operations of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. S. Taylor: Acute Rheumatism.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Robinson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine.

THURSDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Davis: Diseases of the Throat, Nose, and Ear.

FRIDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. Medical Registrar: Demonstration of Cases. 2 P.M., Dr. Davis: Diseases of the Throat, Nose, and Ear. X Rays. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Disease.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Diseases of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4 P.M., Special Lecture:—Dr. R. Lake: Nasal Obstruction.

TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. R. Carling: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 2.15 P.M., Special Lecture:—Dr. F. Taylor: Empyema.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4 P.M., Special Lecture:—Dr. C. Hawthorne: Some Aspects of Rheumatism in Early Life.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. P. Kidd: Bronchiectasis.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Mr. J. G. French: Tracheoscopy, &c.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. G. Holmes: Functional Localisation in the Brain.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. Ormerod: Tabes Dorsalis.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.

TUESDAY.—3 P.M., Prof. F. W. Mott: The Mechanism of the Human Voice. (Lecture III.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.),

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

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